AMERICAN VOCATIONAL JOURNAL

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Skiing Down Slopes of Mt. Hood, Oregon

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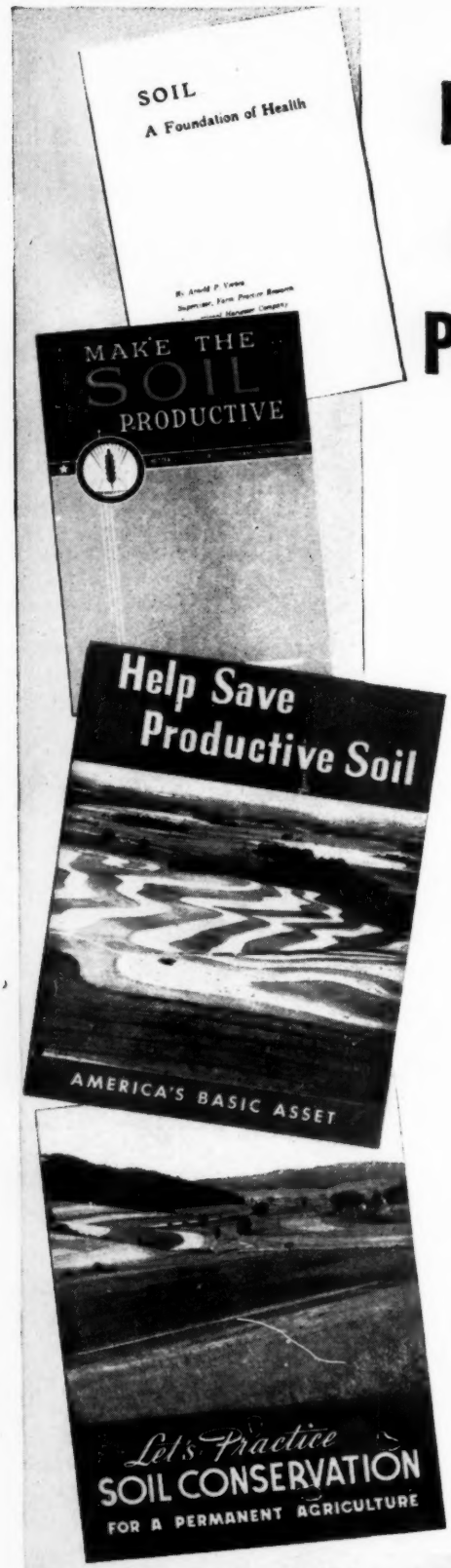
- Improving Farm Structures
- College Goes to Community
- Care of Farm Machinery



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The Cover

Part of the last-won wilderness, Oregon never was owned and governed by any foreign power. Two mountain chains cross the state; Mt. Hood in the Cascades is the highest peak, its altitude 11,500 feet. One fifth of all standing timber in the United States is in Oregon. H.H.C.

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American Vocational Association, Inc., advances American Education by developing economic competence of youths and adults. The Association promotes the professional interests of persons engaged in vocational and industrial arts education. It encourages full-time and part-time programs in these fields: Agriculture, Home Economics, Business and Distributive Occupations, Industrial Arts, Industrial Education, Rehabilitation, and Vocational Guidance.

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Is All Education Vocational?

THE statement, "All education is vocational," is often made. Obviously these are idle words of uninformed or unthinking people. What is the connotation and purpose of such misrepresentation? Is it lack of understanding or is it used as a subterfuge? General education is basic to all vocational education and vocational education is education for life plus training for a vocation. About this there should be no controversy.

Vocational education is a well-established part of the whole pattern and scheme of education. It is more than a part of secondary education. In our schools it rightly provides education and training services for many youth of high school age who are only of elementary school ability, and from that level to those in the post-high school category. Vocational education, on the professional level, is an important part of college and university offerings. Furthermore, the needs of out-of-school youth and adults are largely met through a continuous, unified program of vocational education. While general or academic education is also of great significance for employed workers, it most certainly does not meet their needs for training and education supplementary to their jobs.

There is a very definite need for a better understanding of the objectives, purposes, and accomplishments of vocational education. This understanding can be gained easily by those who are genuinely interested in the welfare of persons who must work for a livelihood.

Much attention has been given to vocational education on a professional level for vocations such as law, medicine, dentistry, architecture, teaching, or engineering. For the past three decades more attention has been given to the specific vocational education and training of youth and adults for vocations below the professional level. It is just as unreasonable to say that only general education is needed to fit persons for work as machinists, electricians, etc., as to maintain that the liberal arts college prepares one to practice the professions.

Training and education for most of the trade, business and agricultural occupations is only partially the responsibility of employers. Youth and adults must be guided and directed through effective school services and vocational education to find themselves vocationally. The vocational schools have a definite responsibility, in cooperation with employers and labor, for training youth for work for which they are needed and for which they are best suited. These schools can give the basic preparation for a vocation, can teach a man how to work and earn a living and also how to live. Vocational education is concerned with principles, with understanding, and with reasoning.

Conflicting opinions and pronouncements of vocational and general educators are detrimental to all education. Closer working relationships should be established through appropriate and adequate representation of both groups around local, state, and Federal educational counsel tables. Much is to be lost and nothing gained by undercover and unfair measures to submerge, dilute, or dismember vocational education.

There are many people who proclaim vocational education in a constructive, forceful, understanding manner as the most effective, valuable, meaningful, and most far-reaching of all education. Certainly academic education has been and is worth while. The real worth of vocational education can be evaluated best by those who profit most from the various types of vocational education and training, and by those who realize that they have profited from such education.

Is all education vocational? Quite obviously not. But general education, supplemented with a strong program of vocational education, is the best education that can be provided by the schools.

Charles W. Sylvester
Director, Division of Vocational Education, Baltimore, Maryland

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PREVENTATIVE MAINTENANCE in the Care of Farm Machinery

Life of Farm Machines Can Be Extended by This Means

A. H. HOLLENBERG
Specialist in Agricultural Education
U. S. Office of Education, Washington, D. C.

This Texas Future Farmer of America is keeping his tractor in condition for work

CARE of farm machinery in vocational agriculture departments is beginning to have new meaning to those engaged in teaching farm mechanics.

Much of the major reconditioning of farm machinery can be avoided, or at least the period of service without repair may be extended, if a program of preventative maintenance is practiced. Such a program entails doing the everyday tasks to a piece of farm equipment which will aid in making it perform correctly. By making these simple repairs and proper adjustments, farm machinery reconditioning is kept to a minimum.

It is estimated that from 50 to 75 per cent of all farm machinery operates out of adjustment. If farm boys and adult farmers were taught this phase of farm machinery alone, better production would result and longer life for farm machinery.

Most farm machines require exact field adjustment. This means that a piece of equipment may be repaired in the farm machinery shop, but the job is not completed until it has been operated and adjusted to field conditions.

A common example of this is the calibrating of a grain drill in the farm machinery shop. This has been done in practically all high school vocational agriculture departments. There is merit to this procedure, particularly when expensive seed is to be planted. Practically all grain drills have acre meters and the "farmer's way" is to calibrate them in the field. Seeds vary in size and even if the machine is calibrated in the shop it must be checked again after it is taken to the field. The same is true of the combine harvester, plows, cultivators, discs, spray outfits, and many other machines.

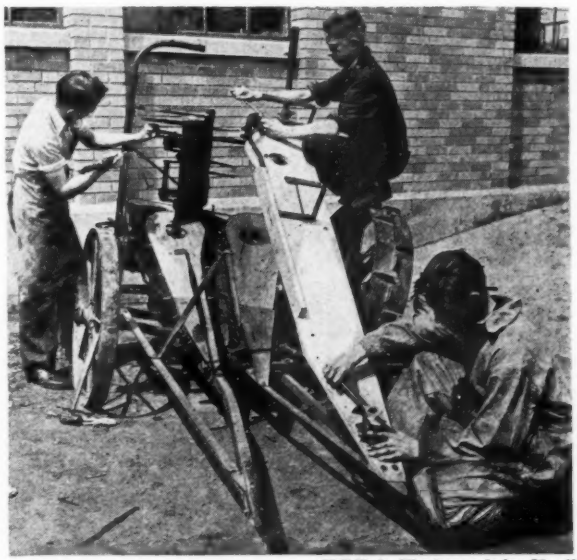
Practically all farm machines are accompanied by an instruction book when they are delivered to the farm, but in too many instances these books are not used in making adjustments. The proper adjustment of farm machines for field operation is ever a challenge and at present it is unsolved.

Belts continuously are becoming loose. They must be kept tight if serious damage to the machine is to be prevented. If a bolt has been lost, the one used to replace it must fit, to give maximum strength to the machine. Welds that become separated should be re-welded immediately. The weakening of one small part may throw an undue strain on the entire machine. Wire to hold parts of farm machinery together must be frowned upon even as a temporary measure. The strain on individual parts is greater than can be borne by the use of wire.

The time for major reconditioning of a tractor may be extended by timely preventative maintenance. During the war emergency, farm mechanics in rural high schools were asked to do major overhauls on tractors. This service was

(Continued on page 28)

Three vocational agriculture students repair a corn binder



U.S.D.A. Photograph by Knell

V. J. Morford

Experiments Prove Water-R

Methods Of Improvi Far

EVEN a casual inspection of farm buildings reveals that many farmers, because of poor construction methods, are the victims of high building costs. Occupied as the farmer is with many complex farm decisions, he cannot be expected to be skilled in meeting all of his construction problems. The farm is "out of bounds" as far as minimum building standards, building codes, and building inspections are concerned. Since professional builders have not found the planning and construction of farm buildings especially profitable, the farmer has to look to others for the help he requires.

The vocational agriculture instructor, through his intimate contact with the farmers in his community, is able to assist in any analysis of their building needs. By working with the local lumber dealer, the local builder, and the state agricultural college, he will be able to give to farmers some of the professional service that is necessary for repair and construction of buildings so they will be sound and serviceable.

Glues, timber connectors, sheet aluminum, cinder blocks, structural steel, and ring-shank nails are only a few of the newer structural materials that are being used in farm buildings. The qualities of some of these are well known. More testing will be required before others can be given general approval. In this article no attempt is made to discuss all of these materials and their use. A few are discussed and construction procedures outlined as they have been practiced in the carpentry laboratory of the Agricultural Engineering Department of Iowa State College.

It is possible to make substantial savings in building materials and labor through the use of water-resistant glues and at the same time build stronger and more rigid farm structures. Casein and urea resin glues are water-resistant glues; plastic and resorcinal resin glues are water-proof.

Up to this time casein glue has been used most because it has been the cheapest of the water-resistant glues. It is mixed with cold water and is easily applied. Being self-bonding, it requires only nail pressure to produce good joints.

The permanency of casein-glued joints is sometimes questioned. No one is ready to say that a casein-glued joint will never fail, but a study of its use leads to the belief that it does produce a permanent structure. It has been used in Europe to some extent for the past 35 years. Examination in 1939 of glued members in structures built about 30 years before, indicated that there had been no more deterioration in the glued joints than in the wood surrounding them. Casein-glued joints made in 1931 in the Agricultural Engineering Department of Iowa State College and stored in an unheated shed have been tested periodically. There is no evidence to date that there has been any breaking down of the glued joints.

The use of glue in the construction of portable farm structures adds materially to their strength and rigidity. In the moving of brooder houses, hog houses, and similar structures, nailed joints tend to fail because of the abnormal stresses and the accompanying vibration in moving the structure over uneven ground. Glued joints are very resistant to vibrating stresses common in the moving of portable buildings.

In the farm carpentry laboratory two types of brooder houses have been built recently in which casein glue has played an important part. One of these was made with glued laminated rafters covered with outside plywood. The floor was laid in the conventional manner. A jig for making the laminated rafters was then laid out on the floor. Two-by-four blocks were nailed as tangents to the inside of the rafter outline. Each rafter was made from six strips of fir or spruce approximately $\frac{3}{8}$" thick and $1\frac{5}{8}$" wide. These strips were coated with casein glue and forced into place

Students covering a laminated rafter building with plywood

Carpentry students completing outside of plywood building

Water-Resistant Glue

Farm Structures

V. J. MORFORD
Department of Agricultural Engineering
Iowa State College

with long wedges. Box nails were used to secure the rafter strips. Care was taken to see that the joints were broken at different points in the rafter. The laminations of the rafter were cut with a planer blade so that there was a moderately smooth surface on which to apply the glue.

One-fourth or ⅜ inch outside plywood was glued and nailed to the rafters. In some of the buildings the edges of the plywood were "ship-lapped" to make a smooth weatherproof joint; in others, the laminations in the rafters were so spaced that it was possible to lap the joints. The latter method is perhaps the more practical method of construction. Special care was used to get a good glue bond where the rafters and sill met. Spacers were placed between the rafters at the joints between the plywood strips.

An analysis of the qualities of this plywood structure seems to indicate that it has the following qualities: (1) The building weighs much less than similar structures built in the conventional manner. This is an important quality to be considered in the construction of all portable farm buildings. (2) A glued plywood structure is very strong and rigid and so is not damaged by the vibrating stresses in moving. (3) This building should be cheaper than the conventional type because of the saving in materials.

The glued-gusset type of construction is one of the simplest of all types of building to construct. Several buildings of this type have been built in the carpentry laboratory. The floors were laid and then the rafter design was laid out on the floor forming a jig in which the rafters were built. The gussets were sawed so that they were just the width of the rafter. This is desirable since it may be necessary to insulate the structure. Glue was applied to both the gusset and the rafter, and then the gusset was nailed to the rafter with seven-penny box nails. Gussets were nailed on both sides of the rafter with the exception of the outside of the end rafters. The rafter and studs were glued and nailed into complete units.

The studding and rafter units were nailed to the floor in the regular manner, and held in place with temporary diagonals until the siding and roof boards were glued and nailed to them. Care was taken to glue the siding to the rafter and the sill at the point where the rafter met the floor. The roof boards were also glued and nailed at all breaks in the roof. By using this method of construction it was found that diagonal braces could be eliminated. This type of construction made it possible for the rafters to be placed three feet on center.

The following advantages of the glued gusset building can be listed: (1) This building is lighter in weight since the amount of structural material is reduced. (2) Glued gusset buildings are strong and rigid, being able to withstand the vibration stresses resulting from moving. (3) There is less material and labor required in the construction of this building than in buildings of comparable size when the conventional method of construction is followed. This type of structure is easy to build on the farm or may be built in lumber yards or carpenter's shop.

The use of glue need not be limited to the construction of smaller farm structures. A farmer near Ames, Iowa, found that he was not able to get delivery of the laminated rafters he had ordered for the large gothic roof corncrib he was building. He decided, after some delay, to build his own rafters out of 1x2 laminations. He found after completion that he apparently had a rafter of as good quality and had made a saving of $400 in the cost of the crib.

The tendency of nails to creep or move outward has been a troublesome problem. This has been especially serious in sheet metal roofing where the expansion and contraction of the metal contributes to the creeping. This problem is not limited to this type of roof covering as this creeping is evident in asphalt roofing, siding, and other parts of the structure where the wood is subjected to marked changes in moisture and temperature conditions.

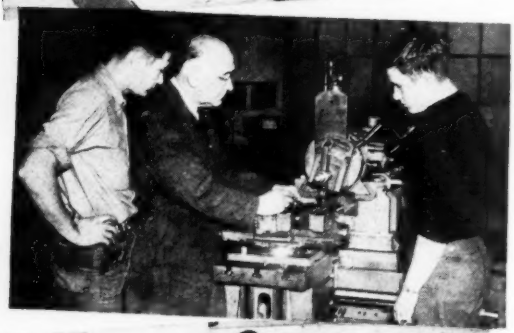
After extended tests of several nail types, it appears that the relatively new ring shank nail does not creep. This nail has more than twice as much resistance to withdrawal as the conventional roofing or common nails of the same diameters.

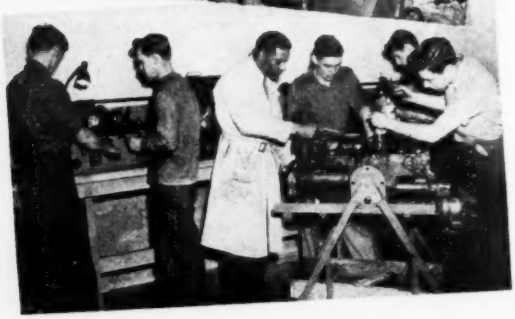
Interior of brooder house **An end view of the completed glued gusset brooder** **A carpentry student applying casein glue to rafter**

Guidance First in New Maine School

State Officials Plan a Flexible Program to Meet Veterans' Needs

Counseling precedes assignment of a veteran to a training program in new Maine Vocational Technical Institute





JOHN H. HUGHES
Former Director of Guidance, Maine

A PREREQUISITE for the new State Vocational and Technical Institute for Veterans stipulated by Harry V. Gilson, Commissioner of Education for Maine, was an effective guidance service before the school opened and a constant expansion of the services during the year.

An outline of a testing program that the Veterans Administration would give to all applicants for admission was provided by Earl A. Reed, chief, Vocational Rehabilitation and Education Division of the Veterans Administration in Maine. A questionnaire for veterans which would begin the core of a cumulative record system, an in-service training program in guidance services for the school personnel, an orientation and counseling period of one week at the opening of school, and a skeleton framework for the operation of the guidance program within the school, was then worked out by Morris P. Cates, director of trade and industrial education and John H. Hughes, state director of guidance.

The new school was not to be restrained in any way by traditional forms of education and training. Curricular materials and methods of instruction could be changed overnight if needed, so that the vocational objectives—the needs, abilities, interests, aptitudes, and limitations of each veteran—could be met quickly and efficiently. Competent counseling so that the veteran might understand himself and adjust his training and personality to a well-selected vocational objective, completes the manual of adjustment of school and student.

The testing program consists of the Otis Quick Scoring Test of Mental Ability and the California Test of Mental Maturity; Occupational Interest Inventory or Kuder Preference Record; Purdue Peg Board; Revised Minnesota Paper Form Board; O'Rourke Mechanical Aptitude Test, Junior Grade; Minnesota Mechanical Aptitude Test (Assembly); and Progressive Achievement Test.

Results are interpreted in relation to transcripts of school and service records and information given in the questionnaires. Additional interpretations follow counseling interviews. Individual follow-up within the school at frequent intervals makes possible changes in curricula, methods, or objectives with dispatch.

The registrar does most of the counseling, and occupational information is provided by instructors and counselor, more for a better understanding of a vocational objective already selected than for the choice of a career. Veterans already have a clear picture of the world of work and definite ideas about an occupation. They are much more advanced in this respect than the usual high school student.

Placement will become a cooperative project with the USES, and school records will be at their disposal when this phase of the total program is reached.

A College Goes to the Community

Texas Rural Town and Workshop Members Benefit by Experience

MRS. DORA HASSELL,
Homemaking Teacher, Joshua, Texas

JOHNIE CHRISTIAN,
Texas State College for Women

CLASSROOM and community experiences were combined in the home economics education workshop at Texas State College for Women last summer, to give in-service training in curriculum making to homemaking teachers and to emphasize integrating philosophy and educational practices.

Ivol Spafford, nationally known home economics expert, was director of the workshop, the local staff in home economics education and H. Gordon Hullfish of Ohio State University assisting in general planning and in teaching. Readings and class discussions centered around the development of a homemaking program as a part of general education and each teacher worked on a problem growing out of her teaching experience. In addition, the class worked on a community project, developing a well-rounded and functional homemaking program for Joshua, a typical rural community located 24 miles from Fort Worth and 59 miles from Denton.

Joshua had discontinued its homemaking program two years before, but had employed Mrs. Dora Hassell, a former homemaking teacher, for the current year. Previous to opening of the workshop Joshua school and community leaders had been contacted and had agreed to participate in a local study of community needs and how these could best be met by home economics.

The workshop group began by tackling the problem of crystallizing the purposes of education, and to this task Professor Hullfish made a notable contribution. Their beliefs were expressed in the following statements:

> We live in one world in which the school as a unit and as a part of the whole should prepare people to understand each other and to live together with mutual satisfaction and understanding.
>
> Each generation should be free to examine the patterns handed to it by past generations with the privilege of adapting and obligation to adapt these patterns to suit a new age.
>
> Each person has a right to be heard and an obligation to make whatever contribution he can that will make for the betterment of himself, his family, his community, and world. It is through such participation that one realizes his full growth and group living achieves its greatest value.
>
> Ideas which represent the thinking of a group usually are better than those produced by one individual thinking alone; therefore people in a community should work together to solve their common problems.
>
> To adopt any one way of doing a job tends to make a monotonous routine out of life and to stifle the imagination and thinking of people. We, therefore, accept the theory of experimentation in education.

During the first week the workshop group drove to Joshua in one of the college busses to talk with the superintendent and meet with the advisory council. This council, appointed by Superintendent Galbreath and Mrs. Hassell, included the superintendent, principal, an elementary school teacher, a member of the school board, two parents, high school students, and recent high school graduates. The superintendent showed the group through the building, and discussed school and community resources with them. The school district covers 63 square miles; most families own their own homes; dairy and truck farming and working in a local gas plant are the main occupations; the total school enrollment is nearly 300 with 80 pupils in the

(Continued on page 29)

Teacher leading boys in a discussion. Improved recreational facilities for Joshua, Texas, resulted from such a conference

PROMOTING *Industrial Arts*

A Minimum Requirement Needed In Academic Teacher Training

WILLIAM E. CASWELL
Head, Industrial Department
McDonogh School, McDonogh, Maryland

***EDITOR'S NOTE:** The following article was accompanied by a letter from the author in which he wrote: "The enclosed remarks were prompted by your page, 'What Do You Think?' in the October issue and the two articles mentioned. . . . Why not invite the leaders in both groups (of industrial arts education) to state their views in the* **JOURNAL**? *With the exception of your signed page, most of the articles that appear in the* **JOURNAL** *indicate that we are all one 'happy family' ".*

The columns of the **AMERICAN VOCATIONAL JOURNAL** *are open to the readers of the magazine for their views and opinions. The editorial policy, as outlined by the editorial advisory council of the American Vocational Association, specifically mentions the importance of publishing material which will stimulate thinking and discussion, and provide for an exchange of viewpoints. It is such free exchange of opinions which broadens and vitalizes our work as educators.*

THE AMERICAN VOCATIONAL JOURNAL *welcomes material from its readers which will promote the progress and encourage the advancement of all phases of vocational education, and which will lead us to re-examine our programs and our philosophy.* **G.H.F.**

IT is not often that two such thought-provoking articles appear in one issue of a magazine as Volla's *Will Industrial Arts Survive?* (1) and Groneman's State Supervision of Industrial Arts (2). Volla paints a dark picture of the status of industrial arts. Conditions certainly are not as bad as he states. Otherwise, he and the men mentioned in Groneman's article would not permit the title, "Supervisor of Industrial Arts," to be appended to their names.

Even if industrial arts is in such a bad state of repair, it does not seem that Federal subsidy for state supervision is the panacea. State supervision undoubtedly is needed. As Volla indicates, industrial arts has too long been treated as the "step-child of vocational education." Whether Federal aid for state supervision is desirable still is debatable.

Industrial arts has progressed slowly from the status of extra-curricular activity to elective subject to special subject to the present generally accepted status of essential subject. Would not a special subsidy for state supervision tend to single out industrial arts as a special subject or, since the Federal aid was to have been provided by a bill for the "promotion of vocational education," would this not tend to make industrial arts more than ever the child of vocational education?

The strength of vocational education for years has been its singleness of purpose—training for entrance into and progress in a gainful occupation. The wisdom of this policy has been proved. The fact that a well-organized plan was ready for expansion in the recent emergency is largely due to Federal aid for vocational education. The successful passage of the recent vocational bill, S. 619, without aid for industrial arts, is evidence of public confidence in vocational education. The increased funds are a challenge to go out and provide more and better occupational training to more students.

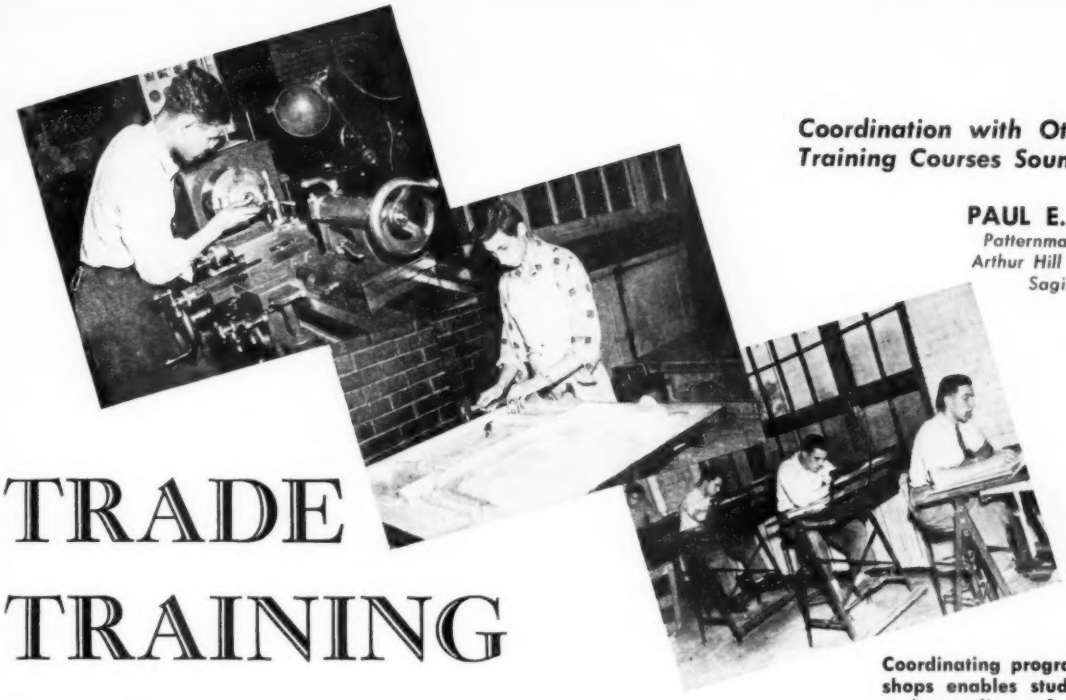
IF industrial arts is a part of general education why should it be singled out for Federal aid for supervision on the state level? Why not science? Music? Social studies? Mathematics? Industrial arts may be the step-child of vocational education but it is a blood brother in the family of general education. Industrial arts may use the same tools, machines, and processes as vocational industrial education but it is taught to the same students as other phases of general education. Vocational education should help students become industrially competent, but industrial arts helps to make them industrially conscious.

Promotion of industrial arts still is largely the responsibility of school administrators. The superintendent hires the teacher and the principal either receives him into his professional family or considers him a handy man to have around. Of course, the usual suggestion is that the industrial arts teacher should "sell his program," or should educate the superintendent and principal in the philosophy and practice of industrial arts.

School administrators do not get their basic training from subordinates in any field. They are trained in professional schools for teachers and school administrators. A cursory study of curricula in such professional schools reveals the fact that the industrial arts teacher education curriculum includes and usually requires a specific number of units in English, mathematics, science, social studies, and physical education. A similar study of teacher education for other subject teachers and administrators will rarely reveal a required unit in either the philosophy or practice of industrial arts.

IT seems there would be a better appreciation of the objectives and problems of the practical phases of education if academic teacher education included a minimum requirement in industrial education.

(1) Volla, Virgil, "Will Industrial Arts Survive?" *American Vocational Journal*, December, 1946, p. 23.
(2) Groneman, Chris, "State Supervision for Industrial Arts," *American Vocational Journal*, December, 1946, p. 15.



Coordination with Other Trade Training Courses Sound Practice

PAUL E. JAQUISH
Patternmaking Instructor
Arthur Hill Trade School,
Saginaw, Michigan

TRADE TRAINING in Patternmaking

Coordinating programs of school shops enables students to gain understanding of relationships

VITALIZING trade work with projects students can take home puts the trade or vocational high school back to the junior high school level. Students must be interested in the processes, techniques, skills, and information while keeping the job a secondary issue.

A program must be flexible in a trade school where students enter with varying backgrounds. This must be in the ground or material to be covered, however, and not for the purpose of catering to the student. Evaluation of trade work should be such that the student understands that his industrial arts work in junior high school had as its principal objective "consumer knowledge." His trade training is for "producer knowledge."

For the classroom teacher there will be no great or quick change in vocational subjects below college level. A few new subjects may be added, a very few dropped. Instruction will be a continuation of teaching the basic principles and background material relative to a trade. On the international level, skill will be used either to raise the standard of living throughout the world or to build for another war, but teachers must continue to improve techniques and procedures in teaching as in the past. Atomic-age changes probably will pertain to the college level of instruction. Trade skills and techniques will be the same for building equipment for atomic power as are being used today.

A school-trained apprentice should leave with a background of experiences which will promote his rapid development. Equipped with this background he has the ability to carry on when transferred to industry. School-trained apprentices are in most of the top jobs from employers on down, because industry recognizes the advantages of an apprentice who has had this basic training and is appreciative of his part in the whole program, time involved in a job, good housekeeping methods, tools, material, equipment, etc. To equip the student thus, a course should be laid out to cover such training. Experience without "know why" does not promote retention. The mental analysis of a job is as important as the training for the skills involved because custom building such as patternmaking requires a high degree of visualization.

For the beginner, provide a work sheet that has complete coverage: analysis of the job from every angle—molding, construction, new techniques, tools, materials, etc. A newcomer wants to make a showing and is reluctant to do too much hunting for the answers to questions. In some cases repetition will be necessary but repetition of old information in new jobs should be avoided. Each job should be entirely new and where repetition is necessary try to alternate jobs.

Such complete coverage is necessary for the beginner because he has no past experience. As he progresses the work sheets should be written in skeleton form letting him lay out his own approach to the job. This can be carried on until in his last period in school the work is set up to simulate trade work in the commercial shop. This should not be done with stock jobs but can usually be accomplished through repair and replacement of equipment within the school system. The student readily sees this is "real work."

The patternmaker of today has a much greater job in designing patterns than did the patternmaker of years back. Throughout the course emphasis should be put on the design of patterns that will produce the simplest and most economical method of producing castings—which must cover "cheap" as well as "first class" patterns.

The course should, when possible, be coordinated with the other metal trades taught in the school. Such coordination is commercial shop practice and is necessary to facilitate better pattern designs. The student gets a firsthand tie-in with the draftsman, foundryman, and machinist.

Both adults and young farmers receive help with problems on the home farm by instructors of high school vocational agriculture courses

GLEN C. COOK
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Michigan State College

Instruction in Farm Mechanics

All-Day, Young-Farmer, and Adult-Farmer Groups Should Have Comprehensive Program

IN order for the instruction in farm mechanics to meet the needs of a community, a comprehensive program of instruction must be developed for all-day, young-farmer (including veterans), and adult-farmer classes. The instruction in farm mechanics must provide for these three groups if the primary aim of vocational agriculture—to train present and prospective farmers—is to be achieved. These three groups are present in every community where vocational agriculture is taught. They have need for and are desirous of training in farm mechanics which will meet their individual needs.

During World War II a new emphasis was placed on farm mechanics activities through the Food Production War Training Program designed for out-of-school groups. This program provided for both young-farmer and adult-farmer classes. The activities of all-day classes in farm mechanics were also expanded, due to the availability of additional equipment placed in the school farm mechanics shops as a result of the war training program. The success of these programs was so pronounced that national, state, and local administrators have become much more aware of the need for this instruction. This will mean larger and better school farm mechanics shops in the future and a more comprehensive program including all-day, young-farmer, and adult-farmer classes.

Thousands of veterans of World War II are now enrolled in classes in agriculture taught or supervised by the teacher of vocational agriculture. Many of these courses are given by special instructors employed specifically for training veterans. As a part of their training program they will have need for instruction in farm mechanics. This training is being provided in a number of schools at the present time.

The instruction in farm mechanics is an integral part of the program in vocational agriculture. It provides for the development of many student abilities in shop activities essential for success in farming and farm family living. The students' programs in supervised farming offer many opportunities for desirable farm mechanics instruction. The importance of this program is being recognized in many states through the allotting of sufficient time in the agricultural program for farm mechanics instruction. This time varies from 20 to 50 per cent of the total time devoted to vocational agriculture in all-day classes, depending on local needs.

The primary objective of farm mechanics instruction is the development of student abilities necessary to perform the unspecialized mechanical activities to be done on the farm with the tools and equipment accessible. This equipment may be accessible through the local school farm mechanics shop, community workshops, mobile workshops, or home-farm shops. Some contributory objectives may be stated as follows: (1) To enable students to construct or repair suitable equipment essential for their supervised farming programs; (2) to encourage and guide students in developing a desirable home-farm shop; (3) to develop abilities in using tools and equipment effectively; (4) to develop student interest, attitudes, habits, ideals, and understandings in farm mechanics activities; (5) to develop abilities in performing good workmanship; (6) to develop abilities in the safe use of

equipment in making the shop a safe place in which to work.

The latest recommendation for farm mechanics instruction was made by the sub-committee on Agricultural Teacher Training of the American Society of Agricultural Engineers in collaboration with an advisory group of agricultural education specialists. This subcommittee which met in Chicago on June 22, 1944, recommended five areas of instruction: (1) farm shop work, (2) farm power and machinery, (3) farm buildings and conveniences, (4) soil and water management, and (5) rural electrification.

A similar group met in Athens, Georgia, June 13-15, 1945 and recommended an additional area: The processing of farm products, to provide for the mechanical phases of this farm-family living program.

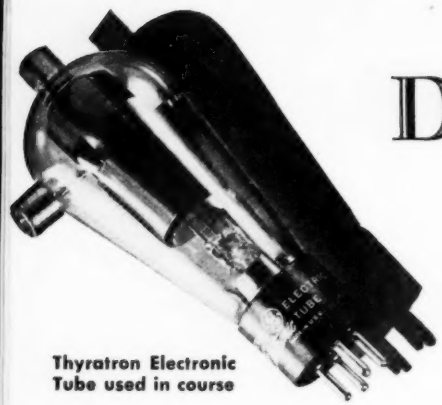
Farm mechanics courses in the repair, maintenance, and construction of farm equipment were in demand during World War II. Farmers developed many abilities essential to the repair and maintenance of equipment and the construction of many labor-saving devices through this program. They will demand this type of training in the future as well as many other phases of farm mechanics instruction. Approximately one-third of the enrollment in the Food Production War Training Program was in farm mechanics. In the appraisal study of this training program, 92 per cent of the enrollees stated they would like to continue their training in the farm machinery course.

In order for young farmers to become established in farming, they must have adequate equipment. They will need considerable guidance in the selection, care, maintenance, and use of equipment. In many instances it will be desirable for them to purchase used machinery and put it in satisfactory working condition through a course of systematic instruction offered by the local department of vocational agriculture. They will need to use labor-saving devices and should have opportunity to construct many through a training program sponsored by the teacher of vocational agriculture. Provision should be made for employment of special instructors for courses of this kind where the teacher of vocational agriculture does not have time to teach the class. The course should be supervised by the teacher of vocational agriculture, however.

Because of the many needs for training in farm mechanics, the local school should provide a comprehensive training program for the three groups: all-day, young-farmer, and adult farmers.

An all-day student making a grain elevator for use in his supervised farming program under direction of farm mechanics teacher in his school program

Adult farmer takes courses in repair and maintenance of farm machinery, equipment construction; makes labor-saving devices in vocational agriculture class



Thyratron Electronic Tube used in course

DYNAMIC ELECTRONIC DEMONSTRATOR

HAROLD W. RANNEY
Supervisor of Industrial Education, New York

High School Students Can Build Them

MANY people today associate the term "electronics" with radio, radar, and the communications systems which were used so extensively by all branches of the military services during the war.

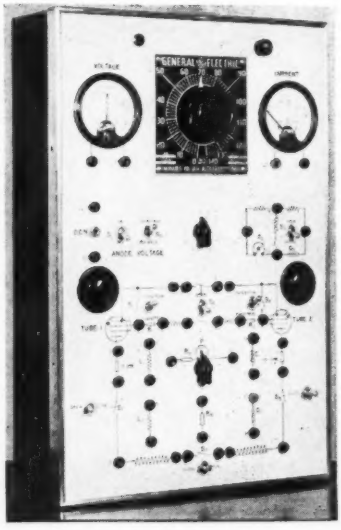
With the return to peacetime industrial occupations, the use of vacuum tubes for control in electrical circuits will probably become increasingly important. Operation of vacuum tubes such as thyratron tubes and phototubes is a subject with which most electricians are only superficially acquainted.

The basic behavior of certain types of vacuum tubes must be better understood by a greater number of electricians who are now employed in electrical, construction, maintenance, and repair work. Also basic fundamentals of tubes should be more commonly included in science and electrical courses which are taught now in industrial and technical high schools.

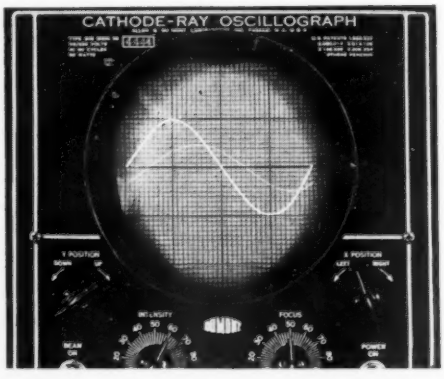
The use of visual aids is becoming an increasingly popular method of instruction and there are many electrical instruments in use today which simplify the teaching of the principles of electricity.

A large number of teachers of science and electricity now commonly use an instrument known as a Cathode Ray Oscillograph to teach the principles of alternating current electricity. At present many high school physics laboratories are equipped with this rather inexpensive instrument.

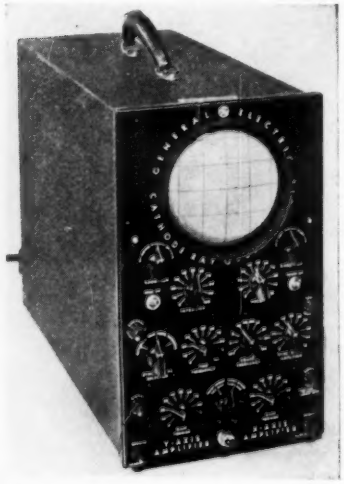
The oscillograph is used to produce a picture or graph of the wave shape of voltages which are in electrical circuits. The oscillograph makes visible on a screen the intricate wave shapes of electrical circuit voltages just as the X-ray allows the physician to "see" the complexities of the human anatomy.



Right—An Electric Dynamic Demonstrator built by students at North High School in Binghamton, N. Y.



Above—A photograph of sixty-cycle voltage and current wave forms taken by cathode ray oscillograph



Left—The Cathode ray oscillograph greatly simplifies teaching students principles of electricity

To understand the action of the operation of the thyratron control tube an Electronic Dynamic Demonstrator was devised by E. E. Moyer and P. T. Chin of the General Electric Company, which may be used with a Cathode Ray Oscillograph to simplify the teaching of electronics to groups of high school students or groups of electricians who are in adult evening classes in electricity. Students at North High School, Binghamton, New York, under direction of their instructors, John R. Duff and Robert T. Lincoln, assembled the parts and built the Electronic Dynamic Demonstrator which is shown in the illustration accompanying this article.

The New York State Vocational and Practical Arts Association has published a monograph, *"The Cathode Ray Oscillograph in Industrial Electronic Circuits," which has actual photographs of oscillograms of voltage wave forms of many industrial electronic circuits. The Electronic Dynamic Demonstrator is a device which may be used with a Cathode Ray Oscillograph to demonstrate to a class with minimum time and effort, all of the complex wave patterns of voltage which are necessary to a student in his study of electronic circuits. It helps the electrician who wishes to become quickly and yet thoroughly acquainted with the basic fundamentals of the behavior of thyratron tubes.

* *Cathode Ray Oscillograph in Industrial Electronic Circuits.* Delmar Publishers, Inc., Albany 7, N. Y., $3.00.

Home Economics Trades Ideas

MRS. EDITH HALL
Senior High School Home Economics Instructor

Lake Worth, Florida, Students Exchange Ideas and Experiences

IN October, 1943, Boletha Frojen, Florida state supervisor of home economics education, first suggested that students of the diversified cooperative training program could exchange ideas with those taking home economics. Lake Worth High School was selected for the trial.

The plan is now well over two years old. Regular meetings of the combined classes have been held repeatedly.

The first cooperative program was a two-day conference in February, 1944, called to experiment with the idea. Home economics students explained the purposes; V. C. Weaver, manager of the J. C. Penny Co. which has been participating in the DCT plan for years, outlined what an employer looks for in a prospective employee. A demonstration of how to dress for business was given by home economics students and a two-act skit was staged in a department store setting by the DCT group.

On the second day, several DCT students explained their work. It was agreed that students would be more interested in increasing their knowledge after hearing different viewpoints; and that each group could receive specific information from the other. A schedule was outlined and the two groups have been participating in the cooperative program since that time.

At the beginning of the present school year, the two departments planned a program of activities to be used when the information could be included in the unit of the year's course of study.

Many home economics students have the task at home of arranging flowers from the family garden. One of the girls in the DCT class was working 20 hours a week for a Palm Beach florist, in charge of the branch store part-time. In a joint meeting of the classes a demonstration of flower arrangement was given by the DCT student, after a movie had been shown on the subject. The home economics students set some dinner tables correctly with proper linen and appropriate china. Many students asked if they might bring flowers from home and experiment at school.

Two outstanding decorations were set up with curly endive, purple cabbage, tomatoes, celery, onions, and green peppers arranged on a wooden tray. The highlight of the flower show was the demonstration of corsage making with talisman roses which are grown in many gardens in Florida. Just before the Junior-Senior Prom, this DCT student was again called upon to demonstrate how to make corsages with gladioli and gardenias.

DCT students of Lake Worth and Palm Beach high schools soon afterwards played host to the District annual convention of trainees and coordinators, which included Miami and Fort Lauderdale schools. One of the features was an employer-employee banquet at which students in charge of the program were hosts. Home economics students of Lake Worth High School coached DCT trainees in the art of playing host for this convention. Several DCT students had expressed a desire to learn more about table manners so they would be completely at ease when dining out. The home economics girls gave a dinner in their laboratory where every detail was planned and thought out carefully. At each table two DCT and two home economics students were seated. The home economics girls had prepared themselves thoroughly by studying all rules of table etiquette. During the meal they answered questions and explained everything as they went along.

A DCT student employed as a dental assistant conducted the next meeting of the combined classes explaining how to care for teeth properly, what type of brush does the best job, and how to handle it. She used photographs and actual samples to demonstrate her points. Mechanical dentistry was explained by a student employed as a mechanical dentist.

Another student, working as part-time assistant at a nursery school, gave information on feeding children. At another session the group was told how to purchase hosiery, what to look for in buying children's dresses, how to select a man's tie, etc. This information came from DCT students who were working in a department store.

At the dental laboratory a trainee learns work

In studying selection and buying of meats, a DCT student employed in grocery store management gave a demonstration using cuts of meat and comparing tough and tender cuts.

There have been many benefits from this cooperative program. Instructors and students feel that the aims of this endeavor have been met and the time spent in preparing and carrying out this program has been helpful and enjoyable. Much has been learned which would have been impossible otherwise.

DCT dental technician trainee explains work at joint meeting

DCT and HE rehearsal luncheon held at Lake Worth High School

Training Farm Mechanics Teachers

Teacher-Training Institutions Must Help Present Teachers and Modernize Agricultural Courses

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Head, Department of Agricultural Engineering
University of Tennessee

ONE of the serious problems confronting teacher trainers today is how to get agriculture teachers properly trained in farm mechanics. Years ago they made a hammer handle, sharpened a hoe, repaired some harness, spliced a rope, and tied a large number of knots for which they had no use. Much of the work taught then was of little value and cannot be justified in the shops of today. Many teachers have not kept their shop work up with developments on the better farms, and teacher-training institutions have not kept up with the more progressive school teachers.

The special training courses sponsored by the U. S. Office of Education during the war have given farmers a vision of the service that can be made available through local school shop. These courses also made it evident that shops were not equipped to do real farm mechanics work and that teachers were not adequately trained. Most schools now are fairly well-equipped, but little has been done about training teachers. There are two groups responsible for the type of work taught in high schools. One is the state administrative group. All have been over-worked, and most have been so busy in their offices that they have not had time to observe and evaluate the work being done in high school shops at present. This group may be expected to make an early appraisal of the present situation and take steps to bring farm mechanics subject matter up to date.

THE second group is the teacher-training institutions. Perhaps the head of the agricultural education department may not be fully aware of changes that have taken place in the high school field. In general, the farm mechanics phase of teacher training is given in the agricultural engineering department. This group also has been very busy, and few realize the rapidity with which farms have become mechanized during the last five years. Neither do teacher trainers always know of the equipment that is now available in high school shops. An additional factor is the difficulty encountered in changing college courses. Agricultural engineers will be reluctant to add new courses or make any changes in the content of present courses. If the head of the agricultural education department and the state supervisor can furnish the agricultural engineering department with specific data showing the need for certain types of courses, favorable results may be expected. The committee on cooperative relations between agricultural education and agricultural engineering has done much to obtain needed improvements in farm mechanics courses in colleges. Static inertia and a lack of knowledge of problems in the field are the greatest handicaps to improvement in teacher training. More and better courses may be offered if the need for them is adequately explained.

MANY teachers are not qualified to use equipment now in shops. Electric and gas welding equipment is now installed in a large number of high schools but few teachers are trained to use it. In some cases high school shops are better equipped than shops in teacher-training institutions.

About half of all farms now have electricity and the percentage is increasing. This brings a large number of new problems to the high school teacher. Plumbing, sanitation, water systems, wiring plans, refrigeration, electric motors, selection of equipment, and economical use of electricity involve problems that are new to teachers and farmers. The successful teacher must have the answers, but few have had an opportunity to take helpful college courses.

Since teachers now on the job did not have an opportunity to get adequate training while in college, it becomes necessary to bring their training up to date. This may be done best by a series of short courses offered in high school shops where 10 or 15 teachers may get together. Such courses may last two or three days and should cover the basic principles. This is a temporary expedient to take care of the present situation, but the real need is for better teacher training.

IN Tennessee, at the request of the agricultural education department, a course in maintenance of farm machinery has been added. It covers the most common repair jobs that occur on farm machines and includes instruction in welding, both gas and electric. A second course covers problems involved in installation of water systems and electrically operated equipment used on farms; pipe fitting, electric wiring, computing power requirements, selecting motors and other equipment; and a study of the economical use of electricity. There are also two courses in erosion control, one in farm buildings, and two in farm machinery. All prospective teachers take one course in elementary carpentry and one in hot and cold metal work during the first two years of college. Ample training courses thus have been provided to enable a teacher to get sufficient training so he can teach the type of farm mechanics needed in high schools today.

VOCATIONAL agriculture has made rapid strides in recent years, and the war training courses have demonstrated to patrons that the school can be a very important part of their community. Most farmers have not had an opportunity to keep up to date on mechanized farming and since that is the phase of farming that is developing most rapidly, it is the duty of local school officials to provide that training. Colleges must give prospective teachers sufficient training so they can meet the problems in the field. When the need for a spcific type of work is clearly shown, teacher-training departments may be expected to meet it.

CELIA FEINSTEIN
San Antonio Vocational and Technical High School, Texas

PUPIL ACTIVITIES in Business Education

Course Objectives Learned Best Through Creative Participation

A student demonstration of selling yard goods

ONE important outcome of part-time employment is vocational preparation for an occupation. For those who have not yet chosen their occupation, it has a definite exploratory value. Some see great social and personal value for pupils who accept part-time jobs while still in school. They contend that everyone should know something about work and the way to learn is to do some of it. Parents, teachers, employers, and pupils speak of qualities such as confidence, responsibility, initiative, etc., thus developed.

In the classroom, pupil activities play a large part in the attainment of the objectives of vocational business education. For example, as the teacher discusses the importance of honesty, dependability, learning store rules and regulations—job ethics considered important by merchants and the world of business as a whole—pupils enjoy relating experiences which stress certain of these job ethics. Teachers learn interesting facts about the pupil as he tells of such occurrences.

After the class has studied salesmanship and the customer analysis, actual sales demonstrations are a good test of whether class members have assimilated techniques of salesmanship. As the "sale" takes place, other members of the class notice the good, average, or poor techniques used and at the conclusion, comments are made. In this way all the class benefits.

After the textbook study of display and its principles, a successful way to discover pupils in the class who have talent, is to let them put displays in the classroom showcase, and on the bulletin board. In this school two students work out their central theme, bring merchandise from the stores in which they are employed part-time, and arrange the display. They place a courtesy card in the window giving names of the stores which loaned the merchandise. Employers are invited to the school to see what their trainees have done and many are pleasantly surprised at the ability evidenced. Getting the employer to the school is another way of cementing good will between school and business world. Oftentimes the trainee is allowed to further exercise his display talents in making counter and window displays at his store.

When studying store English or store arithmetic, playing "word baseball" or "number baseball" is an interesting pupil activity. The class is divided into two teams; each team has a pitcher, catcher, etc. One pupil "pitches" a word to another; if he "catches" it by spelling it correctly, he "pitches" it back to the other team for its definition, etc., and a score is kept. The same procedure can be used in arithmetical processes.

Personality development is one of the main objectives of a distributive education course. In order to be liked one must develop traits of character and behavior that are admirable. A good way in which to study this is to let each pupil type himself by taking personality tests. After a thorough classroom study of personality types, it is interesting to let each pupil grade another on appearance, voice, friendliness, tact, courtesy, etc. No person knows who is checking him. At the end of the week each person receives his personality rating sheet as checked by someone else in the class. If he rates low on certain factors and would like to have these discussed, he requests the teacher to let him talk with others about them. If handled tactfully, much self-improvement can result.

Numerous texts, leaflets, and manuals can be used as bases for class discussions, including the importance of personal hygiene and the place of courtesy and tact off and on the job. Pupils like to relate incidents that have occurred illustrating these points.

After the class has studied the importance of color, style, and line an interesting pupil activity which ties in with personality development, is to let each pupil stand before the class and, *at his request,* be "torn apart" by his classmates. Such questions as these may be asked: "What is her most attractive feature?" "Does she emphasize this in her make-up or in her dress?" "What are Mary's most becoming colors?" etc.

When the class completes this questioning, Mary should have some definite suggestions as to how she can improve her appearance.

Pupils like to make manuals on their work and this is an excellent means of developing self-reliance and originality as each person plans and executes his manual. One girl, working in a dress shop, made a manual showing types of dresses worn for various occasions. Another girl made a manual on hats, entitled "Let's Go Heady." Still another pupil included the china, silver, and crystal patterns sold in her place of employment. All such activities develop initiative.

The final report of the American Council on Education motion picture study project states: "The textbook and the textbook lesson, valuable as they have been and still are, no longer can be considered adequate as the sole source of learning experience and teaching procedure."

Guidance, A Vital Link

FRED M. FOWLER
Director of Guidance Services, Utah

Points of Conflict Eliminated By Accepting a Common Purpose

THE existence of certain points of conflict between general and vocational education is well known. It may be more accurate to speak rather of points of conflict between general and vocational educators, or between two kinds of education as now generally administered. The points of conflict usually are a reflection of some aspect of prejudice on the part of the educators or of students and adults in the community. Such phrases as "dumping ground," "white collar complex," "social prestige," etc. are heard in discussions of the two main divisions of educational opportunity.

The disparity in esteem is felt most keenly in the traditional functions of selection and recruitment. The efficacy of the cure suggested here may be gauged by the degree to which the possibility of conflicting interests in these traditional functions is eliminated. There is question as to the possibility of ever realizing smooth articulation of so-called general and vocational education until recruitment and selection lose their traditional identity as distinctive processes—competitive soliciting of trainees and an imposed decision as to acceptability.

Good working relations between educators having supposedly different vested interests must wait upon a statement and acceptance of common purposes. Good practice follows good philosophy. The cornerstone of a good educational philosophy is the democratic ideal of providing for each person what is to him his most favorable educational experience. There are at least two major parallel phases to the realization of this ideal: (1) Provision of needed physical and instructional programs and facilities, and (2) establishing a free flow of each person toward his most favorable educational opportunity.

BOTH of these phases admittedly are complicated. The first is made complex by budgets, employment markets, and various economic considerations. The second is made difficult more especially by the individual prejudices and misunderstandings of those directly concerned. The two phases are not wholly parallel. Limitations of budgets, programs, and training opportunities and jobs make difficult the realization of the most favorable educational experience for every person. Yet the means of securing articulation between general and vocational education lie primarily in the statement and acceptance of procedures for carrying on the second named phase—securing a flow of students toward their most favorable, for them, opportunities (whatever the opportunities are that may be available). This is the only approach to the complete elimination of the basic points of conflict.

While acceptance of this thesis by general and vocational educators is the all-essential first step (and the one that has been overlooked), it cannot be accepted glibly because its acceptance carries far-reaching implications.

Brief mention of certain of the implications may be enough to establish the thesis and point to the means.

(1) Selection takes on a new meaning. It becomes selection of educational opportunity by the student based upon a realistic weighing of information about all of the essential factors related to vocational choice and in terms of the individual's needs, interests, circumstances, aptitudes, and abilities. Ideally, there can be no residue of rejected individuals since no one would select anything that is not really opportunity to him, and since each individual, short of complete custodial care, must find some opportunity.

(2) Selection, therefore, is a process which varies in length of time and complexity for each person. It is obvious that it begins for most pupils in the elementary school years when interests begin to find expression and when information from various sources about occupations is acquired. Selection, then, extends for most pupils through all the experiences in and out of school which help each individual to assess his aptitudes, abilities, and interests, and to weigh circumstances against opportunities. Nor does the process end when a decision is made to take specific occupational training. Adjustment and readjustment during the training period and beyond to successful placement cannot be separated from selection. Selection of opportunity by the individual is not a single event. It is a fundamental part of the process of adjustment.

(3) The basic services of the guidance program are readily seen to be the "machinery" through which the selection process can best be secured. Counseling is the main basic service of the guidance program. This vital educational service should be available as needed during the years when and as selection takes place to help individuals having problems of personal concern to identify and understand their problems and to gain insights and understandings about them. Counseling also should help students to bring to bear and understand all essential data about themselves and their educational opportunities and aid them in making favorable choices, plans, and adjustments. Counseling so understood can be possible only when recognized and provided for as a distinctive professional service supported by adequate individual inventory and informational services, as well as by the supplementary services of placement and follow-up.

(4) Recruitement is the inevitable by-product of the "machinery" of this new kind of selection. Recruitment also becomes an unapparent aspect of the vocational program's public relations both with the "feeder" programs of general education and with the community.

(5) Certain aspects of public relations are worth special emphasis. Vocational educators will not have to worry about protecting their relations with the employment market by insisting on admitting to training only those trainees having superior qualifications. Counseling, based on adequate individual inventories, prior to and during training, can locate feasible occupational goals below the skilled, job-setting, layout level for which the vocational program's training may be a stepping stone. In accepting persons of lesser ability, the school's placement service is protected by its ability to let employers know what not to expect of the trainee.

VIEWED in this way, the vocational program becomes a positive educational experience. It cannot be a "dumping ground" since each trainee makes a positive choice. Recruitment is no longer necessary as a defensive competitive enterprise. A full weighing of all of the factors which should influence occupational choice makes selection something more than a sorting of the sheep from the goats on a gauge of academic ability. Moreover, superior ability will find its way into the vocational program in sufficient quantity when sheer opportunity is fully considered without prejudice, as it can be when selection is made the by-product of competent guidance services.

The guidance program thus provides the one sure means of securing an unhampered flow of individuals toward their best educational opportunity, and also of eliminating points of conflict among educators.

Vocational Associations DAY

FLORENCE V. RITCHIE
Chico State College, California

California Promotes Understanding Through Area Vocational Meetings

"THE Cooperative Enterprise" was the keynote address that launched Vocational Associations Day at Chico State College, Chico, California. From remote schools in the high Sierras to the extreme reaches of Sacramento Valley came the educators of northern California to participate in this event—teachers from 32 of the 53 schools in the 14 counties in the Sacramento basin.

Based on the philosophy that people work together better when they know and understand what the other is doing, this day was planned as a get-acquainted meeting for vocational educators of this extensive northern area. Touring the exhibits with a trained leader, each group of 15 or 20 mixed personnel from different schools and departments was encouraged to get acquainted with other teachers in the area, to learn what is being done in other vocational departments of the school, and to get new ideas for better teaching.

Exhibits represented work in business education, agriculture, guidance, home economics, and industrial education. Demonstrations in stainless steel welding and in plastics offered an interesting half hour. Exhibits of leather work, lapidary, metal craft, and plastics drew excited admiration. Strange machines that were almost human were the offering of the business education department. With posters and brief talks the agriculture teachers gave an over-all picture of their program. The guidance exhibit showed results of local surveys that were explained by the coordinator. In the home economics department a family-size frozen food locker with supplies for processing food, was the center of attention. There were exhibits in consumer education on the buying of upholstered furniture, and men's shirts and hats. The center of some discussion among the men was the exhibit of boys' and girls' ensembles showing the poor use of color and design in the one, good use in the other.

The art student who demonstrated screen printing had an engrossed audience. The movie, *Film Tactics*, was shown as the contribution of the visual education department and was immediately reserved by several high schools for future use.

Each leader conducted his group on a pre-arranged itinerary. Several leaders found their charges so absorbed in certain exhibits that they were lost enroute and some joined other groups. The responsibility of the leader continued through the luncheon at which questions were introduced to further mutual understanding and exchange of ideas.

The day's objectives were summarized following the luncheon by an address, "Education for Self Realization," by H. B. McDaniel, Bureau of Occupational Information and Guidance, State Department of Education, Sacramento. Organization business meetings of the various associations and of administrators concluded the day's events.

The cooperative enterprise was initiated when the state superintendent of public instruction, Dr. Walter F. Dexter, in 1945 appointed Julian A. McPhee as director of vocational education for California. Under his administration the California Vocational Commission includes the bureaus of agricultural education, business education, occupational information and guidance, homemaking education, and trade and industrial education. Acquaintance and understanding has been developed between the staffs of these bureaus. Each state vocational education organization was asked to send three representatives to a state advisory committee meeting. This advisory committee includes 15 organization delegates and the chiefs of the five vocational bureaus who meet twice a year.

After the advisory committee had met several times and were well acquainted with goals and achievements of each other's department, the get-acquainted program was planned for the local areas. Its objectives: (1) To further full acquaintanceship among all teachers, (2) to provide a channel for clearing information, (3) to further understanding of common purposes and problems, and (4) to promote a well-rounded program of education.

The state was divided into nine areas with skeleton steering committees to assume leadership. Utimately the committee included representation from each of the five vocational associations, school administration, and county superintendents of schools. Regional supervisors from the California Vocational Commission serve as sponsors or advisors to the steering committee. The steering committee elects the chairman of an area meeting and small meetings between nearby schools

(Continued on page 37)

One exhibit indicated jobs for trained home economics women

Missouri Improves D. E.

Gallatin Changes Teaching Method; St. Louis Stresses Salesmanship

DISTRIBUTIVE education has progressed.

How do we know? Because those working in the field now argue whether it is desirable to teach by the inductive or deductive method. All agree that each branch of distribution is definitely individualized; that selling principles remain the same for all branches of merchandising. A sale must be divided into the approach, interest stage, creating desire, and closing. Whether the principles are covered by one method or another will depend upon students and teacher.

In trying both methods, this school decided that specialization should come after the general fundamentals of selling p.inciples. The school is located in the heart of the agricultural area of the U.S. Students are rural people; many never have had an opportunity to deal with the public. Enrollment is small, so two-year people and beginners are in the same class.

Students at first seemed unable to understand what was expected of them when placed on the job. This, it was decided, was due to the fact that specialization had been stressed without first going into general discussion. The student had not had an opportunity to orientate himself to this new subject and was not accustomed to individual study. The matter was discussed with the training stations and it was the trainers' wish that students be instructed in fundamentals of selling before turning to specialized work. This advice was followed and immediately students improved. Second-year students gained more confidence and were more willing to devote time to special work. The objective could be seen in a different light.

THE greatest improvement was with the beginning students who gained much from the class discussion and furthered their general knowledge as well.

The viewpoints of a student and an employer follow:

W. M. Harrison, Publisher, Member Merchants' Advisory Committee: "Although the program is in its second year in this community, my business firm never has participated. Such is my intention in time, because I can see where it is as much value for me to encourage and help train young persons in the newspaper and job printing business as it is for any other type business institution in this city. I have observed that school students who wait on me as a customer in the stores seemingly are as well qualified as any other salespeople I encounter. I have talked with merchants who have students working in their stores. They are highly pleased with the results."

Tommy Wilson, a Student: There is no other course in the curriculum which furnishes the student with so much information and self-confidence. In a two-year course a student who properly applies himself can learn the rudiments of a business he may some day enter, through techniques and studies in the classroom and a planned on-the-job program."—*Bernice Kirby, Coordinator, Gallatin High School, Missouri.*

ONE aspect of training in retail merchandising, salesmanship, is given particular emphasis. Personal selling is not the only "pebble on the beach," but it is increasingly becoming more of a profession. Today the pendulum has swung toward the customer, which means that salesmen must render an appreciable service to him. Business management is cognizant of the importance of continually promoting good will and the sales force occupies an important niche in the undertaking. It is apparent that training those in-service, as well as beginners, is vastly important. Those entrusted with the responsibility must work together cooperatively.

SALESMANSHIP has too frequently been offered only as an elective course in a program of business education which includes shorthand, bookkeeping, and typewriting. Those responsible for furthering this training desire to develop a generation of salespeople and storekeepers whose philosophy gives more attention to the prerogatives of the customer, with the service motive predominating. Customer-conscious salespeople are not only desirable, but constitute the apex upon which the course is postulated.

The salesperson must be a well-rounded individual. His personality, manners, and traits of character must converge into a pattern which is exemplary. He must know something about merchandise, principles of art, and be a student of human nature. His knowledge should not be superficial, but must instill confidence. Salesmanship can justify its existance as a course to the degree that it helps to build mental and physical stature of men and women.

EXECUTIVES place especial emphasis upon personality, that combination of qualities which make a person especially strong and effective in executing the sales process. Practically all sales are, essentially, a man-to-man transaction, even though self-service and vending machines appear to be gaining momentum. It has been estimated that approximately 45 per cent of customers transfer their allegiance from one store to another because of personalities.

A salesman cannot escape the fact that he must make a careful study of human nature. If he possesses all of the attributes necessary to the performance of his duties and is negative in his thinking, he will suffer the humiliation of defeat.

If we sell distributive education successfully we cannot minimize in this teaching the importance of personality in salesmanship.—*C. Dwight Horn, Retail Coordinator, Roosevelt High School, St. Louis, Missouri.*

U. S. Vocationalists in Brazil

Brazilian American Commission Aids Rural and Industrial Work

SHERMAN DICKINSON
Chief of Party
Commission for Rural Education

ON October 20, 1945, the Inter-American Educational Foundation, Inc., and the Ministry of Agriculture of Brazil signed an agreement which created the Brazilian-American Commission for Rural Education. At about the same time a similar agreement was signed between the Foundation and the Ministry of Education of Brazil creating a similar Commission for Industrial Education. These commissions are familiarly known respectively as the CBAR and the CBAI.

The agreements call for joint contributions of considerable sums of money for conduct of projects beginning January 1, 1946, and ending June 30, 1948. The objective is to bring about improvement in the agricultural and industrial situations, principally by means of education. The personnel of the American technical staffs were selected from among men who had demonstrated their abilities in these fields in the United States.

Chief of the Party for the CBAI is George S. Sanders, state supervisor of trade and industrial education in Arizona from 1927 to 1940. For the next three years he was on the staff of the Office of Education as special agent, detailed to the Air Service Command for work on training programs. During the years 1943 to 1946 he was engaged by the War Manpower Commission; he went to Brazil in November, 1946.

Louis B. Beres is the second member of the CBAI group. He has been in Brazil the past three years working for the Ministry of Education as supervisor of industrial education in Rio de Janeiro and São Paulo. Earlier in his career he had been director of industrial education in Alexandria, Virginia, and more recently with the U. S. Office of Education as special agent assigned to the War Training program. Mr. Beres is a graduate of the University of Alabama with a Masters degree from George Washington University, Washington, D. C.

During November, 1946, Dr. David F. Jackey, arrived in Rio to spend six months as a member of the CBAI to act as consultant and to make special studies and surveys. Dr. Jackey has been connected with vocational education in California for many years and is at present professor of vocational education at UCLA and director of trade and industrial teacher training for both UCLA and Berkeley. He is a graduate of the Carnegie Institute of Technology and has his PhD. from the University of Pittsburgh.

The latest addition to the industrial staff is Frank E. Gilpin. Mr. Gilpin was closely connected with industrial education in Arizona for many years. and has more recently acted as special agent for the U. S. Office of Education and later as a member of the technical staff of the War Manpower Commission. Mr. Gilpin's special responsibility in Brazil will be in shop organization and management and safety programs.

Two experienced vocational agriculture teachers were added to the CBAR staff in October. One of these is John R. Formby, Holtville High School, Deatsville, Alabama. Mr. Formby had taught at this school for 18 years and had developed an outstanding community program including sawmill, cannery, hatchery, freezer lockers, abattoir, community farm machinery, and adult classes. He has his Masters degree from Alabama Polytechnic Institute.

A. Louis Oder has been a teacher of various subjects including vocational agriculture, at Buffalo, Illinois, for 10 years prior to the late war, except for three years when he served in the Army Air Corps. He is particularly interested in livestock improvement. Mr. Oder has Masters degrees from the University of Illinois and Colorado.

The writer is Chief of Party of the agricultural staff, and arrived in Brazil September 30, 1946. He will be particularly responsible for the organization and development of a teacher training program in agriculture. An experience in teacher training consisting of 32 years at the Universities of Minnesota, Idaho, and Missouri, should be of considerable value in this work.

The total program in each field involves a study of the Brazilian situation and needs, sending Brazilian vocational educators to the United States for study, working with the Federal and state authorities in organizing teacher training institutions and courses, and the development of industrial and agricultural training centers.

The program in Brazil appears to be a tremendous undertaking, but one that is very badly needed for the development of the country.

The accompanying photograph of these American educators in Brazil was taken at a typical working conference at which mutual problems were under discussion. It was taken in Brazil this past fall after the two staffs had been assembled for their work there.

Left to Right: Jackey, Sanders, Beres, Dickinson, Oder, Formby

Check for $981,660,783

On rural routes everywhere in America, on snowy highways of the north, on sunny by-ways of the south, live the 5,500,000 ranch and farm families who produce America's supply of food. It's a big supply, too, the greatest in the world. From your farms and ranches in 1946 came livestock, dairy and poultry products and crops to the value of about twenty-three billion dollars, according to latest available government estimates. Meat animals and dairy and poultry products accounted for about 60 percent of the total farm cash income, current estimates reveal. Agriculture, the nation's most essential industry, is "big business" in every sense of the phrase.

Of all your cash income last year, $981,660,783* came from Swift & Company in payments for livestock and other agricultural raw materials. We purchased your livestock and other products and converted them into millions of pounds of quality meats, valuable by-products, other foods and products. Part of the money you received from Swift came from our meat packing plants, dairy and poultry plants and buying stations. Another portion of the money paid out by us was for soybeans, cottonseed, peanuts and other raw materials.

Swift provides a wide, ready, year 'round market for your livestock and other products — and out of every dollar we receive in a year from sales, we return, on the average, 75¢ to you. Last year, 1.3 out of each dollar of sales was profit. Part of this amount was paid out as dividends to the 63,36 shareholders as a return on their investment. Part was retained in the business for future needs.

**The actual amount paid for livestock and other agricultural products is greater than shown by the amount of the subsidies paid by the Government.*

Soda Bill Sez:

. . . what's wrong with people is not their ignorance. but the number of things they know that aren't so.

Feed Values Are Soil Values

by Wm. A. Albrecht
University of Missouri

Wm. A. Albrecht

Recently a farmer friend of mine told me, "I've moved to another farm where I get bigger yields in all my feed crops. But even though I shovel much more corn and pitch a lot more hay, I can't get my calves to market as early. I'm just not growing as much meat per acre."

This man doesn't realize that feed bulk is no indication of feed value. Livestock will not gain more on larger rations unless the feed value of any crop is derived from the basic plant food elements found in the soil. The crop must first build up the woody structure that makes up its bulk. Then, if soil conditions are right, the plant will store up a supply of the raw materials of protein, vitamins, and mineral compounds. Thus, whether a crop offers anything more than bulk and fattening power depends on the condition of the soil on which it grew. *Livestock may be fed great quantities of feedstuffs produced on poor soils and still fail to gain weight.* It is soil that has been guarded against erosion, fertilized properly, and carefully managed, that grows nutritious crops. Such soil will produce crops that give better feeding results and make more meat per acre.

Returns for Savings

It is not the investment of a few rich people that has built Swift & Company, but the pooled savings of 63,365 people. Among them you'll find farmers, ranchers, lawyers, doctors, mechanics, business people—folks from every walk of life . . . including 29,941 women.

The savings these shareholders have invested in Swift & Company provide the plants and facilities—the tools with which we handle your products. The return for their thrift-ness comes to them as dividends paid out of the company's profit. In 1946 that dividend amounted to $1.90 a share.

FOR PEOPLE . . . BY PEOPLE

We at Swift & Company think of our business as being owned by 63,365 people, the shareholders and their families, and operated by 66,000 employes. We provide essential services for agricultural producers and many other large groups of people. Employment is created for other thousands who work for railroads, trucking firms, livestock commission houses, stockyards companies, and the suppliers who furnish us salt, sugar, boxes, barrels, machinery and a thousand-and-one other things. A part of the business of thousands upon thousands of retailers everywhere in the nation is in purveying Swift's quality meats and other products to millions of American families.

In return for all the effort that made these services possible, the folks who work for Swift earned $164,013,099 in wages and salaries in 1946. This sum is 88% of the total remaining after all bills except taxes were paid, and is *ten times more* than the company's total net profit.

Swift & Company UNION STOCK YARDS CHICAGO 9, ILLINOIS

NUTRITION IS OUR BUSINESS—AND YOURS
Right Eating Adds Life to Your Years—and Years to Your Life

"WHERE DID THAT $1,308,364,155 GO?"

During 1946 Swift & Company received $1,308,364,155 from the sale of its products and by-products. By the end of the year the Company had earned a net profit of $16,394,739, which is slightly less than 1.3¢ on each dollar of sales.

What happened to the rest of that money?

Well, the largest part was paid to farmers and ranchers who sold us livestock and other agricultural products. They got $981,660,783* or 75¢ out of the average sales dollar we received for products sold, including all by-products such as hides, wool, soybean meal, etc.

The next largest portion of our sales dollar went to all Swift employes. Their share of the dollar was 12.6¢.

Fuel barrels boxes paper salt sugar and other supplies took 4.8¢ out of the average dollar.

Transportation took 2¢. (Meat travels, on the average, over 1,000 miles from producer to consumer.)

Taxes took another 1¢. All other expenses, including depreciation, interest and miscellaneous business costs, amounted to 3.3¢.

All these costs taken out of the sales dollar left 1.3¢. This was Swift & Company's net profit in 1946 — a profit of only ¼ of 1¢ on each pound of the millions of pounds of products and by-products handled.

Wm. B. Traynor, *Vice President & Treasurer*

Teacher Recruitment

Coordinating Council for Home Economics Surveys Procedures

PAULINE H. DROLLINGER
State Supervisor of Home Economics Education, Wyoming

BECAUSE of concern relative to the home economics teacher shortage, the Coordinating Council, comprising representatives from the elementary and secondary section of the American Home Economics Association, and from the home economics departments of the American Vocational Association and the National Education Association, have been promoting development of a film, a film strip, and other guidance materials and procedures as a means of interesting young women in entering the teaching profession.

To determine what is now being done in the states, state home economics association presidents and state and city supervisors were asked to reply to a one-page questionnaire. Twenty state associations and 26 state supervisors replied. All cited recruitment efforts now in progress, and expressed an interest in having films, slides and more publications that would inform girls of professional opportunities in varied fields of home economics, including teaching.

THE following recruitment activities were reported: Home economics teachers, guidance persons, and school superintendents have been informed in conferences, through letters, or articles in state publications, of the great need for home economics teachers and of the opportunities, and have been asked to discuss this with outstanding high school girls.

Names of interested seniors have been sent to colleges and universities and personal letters written to each girl.

Institutions in one state issued an invitation to each interested senior girl to spend the week-end as a guest of the college.

The state superintendent of public instruction in one state sent a letter to all senior class members telling of opportunities in teaching in general.

In one state the University Home Economics club sent a chatty mimeographed letter to all senior girls telling them about home economics at the University.

College faculties visit high schools and talk with groups of girls or attend high school "Career Days."

State supervisors and itinerant teacher trainers talk to girls about home economics careers and teaching.

State and district Future Homemakers of America meetings have included talks on careers in home economics including teaching, by university staff members, the University club or State Home Economics Association president.

One state FHA project is a program meeting for all senior girls where careers are presented.

One state adviser for FHA talks to local chapters about teaching and other home economics careers.

In one state, colleges plan guidance days when a select group of high school girls are invited to the colleges.

Several states mentioned career units in the state teaching guide for advanced classes in home economics which gives emphasis to opportunities.

Freshman home economics guidance or orientation courses in colleges give information on teaching along with other careers in home economics. Teacher trainers or state supervisors sometimes present teaching to these groups.

One state supervisor participated in a radio program.

Five states mentioned state committees, four in the State Home Economics Association working on promotion of home economics; one appointed by the state superintendent working on teacher recruitment.

Articles on recruitment are published in some state publications, in general education releases, and in the state home economics association newsletters.

Three state associations distribute information about opportunities to high school guidance staffs and home economics teachers.

FIFTEEN questionnaires mentioned use of the American Home Economics Association Publications, *Careers in Home Economics* and *Teaching Home Economics as a Career*. Four state departments make these available to each home economics teacher, two provide them to guidance people, another sent a copy to all interested senior girls whose names were obtained, and eight others made a general statement that the publications were used.

Other publications used were: *If I were to be a Home Economics Teacher in Michigan High Schools*, prepared by Mrs. Merle D. Byers, Michigan State College, East Lansing, 1945 (Not available for general use; one copy per teacher trainer available); *Opportunities for Women at Montana State College*, 1943, available from Dr. Katherine Ray, head of home economics, M.S.C., Bozeman, Montana; *The Girl You Can Be*, Home Economics Department, University of Nebraska, Lincoln, Nebraska; *Teaching Homemaking as a Profession*, Vocational Homemaking Education, University of Nebraska; *Dietetics as a Profession*, American Dietetics Assn.; articles in *Colhecon*, in *Practical Home Economics*, in *Forecast Magazine*, and in *American Home Economics Association Journal; Be a Good Home Economics Teacher*, 1943, Purdue University; *Education Qualifications for Nutritionists*, American Public Health Association; *The Business Field of Home Economics*, American Home Economics Association; *Careers in Teaching*, a page in *Work and Training Vocational Information for Virginians*, April, 1944 (not available); *So You're Going to Teach*, by Eva Knox Evans, Julius Rosenwold Fund.

THREE states prepared and distributed charts on careers in home economics. The only film mentioned was *Assignments for Tomorrow*, available from the NEA.

Three state association presidents were interested in setting up coordinating committees of representatives of the three professional organizations concerned with home economics teaching in their states and this will be considered at the fall meeting. Eleven state supervisors welcomed the suggestion for such state coordinating committees and will promote the plan. Sub-committees of the National Coordinating Council are being formed to work on development of a film and a radio script that will describe opportunities and activities of a homemaking teacher.

Vocational-Technical School Program Must Consider This Important Factor

MENTAL HYGIENE

BLANCHE M. PENN
Assistant Supervisor
Girls Trades, Connecticut

AS A secondary school concerned with the education and training of adolescents, the vocational school's program should be developed, adopted, and carried out with reference to the intellectual, social, emotional, and vocational needs of the student body.

The basic needs of all individuals are much alike, although different needs appear greatly emphasized, or greatly diminished at different periods of growth. The development of a complete program in a vocational-technical school must be concerned not only with the organization of instructional materials according to current trade practices and good instructional order, it must also be concerned with the growth of individual student personality as an entity, instead of ending, as in the past, with the development of a skilled worker.

A vocational school which practices the principles of mental hygiene gives consideration to the following factors.

A curriculum adapted to individual abilities. A good philosophy of vocational education would assume that the student progresses at his own rate of ability. After the instructor has become acquainted with the capacity of the student, observed the quality of his work in the shop and classroom, and has had several conferences with him about his work, he is able to make a decision as to whether the student can complete the entire trade program or only a segment of it; that is, the student may be taught one of the lesser skilled occupations in the trade. It is apparent, therefore, that a policy of selectivity for those admitted to the full trade is an attempt to eliminate those who would obviously be working much beyond their capacity and whose chances of failure in the trade work would be high. Steering such students to an occupation within the trade which is not beyond their abilities is sound. The student has a reasonable chance to achieve success in the lower skills, and to feel that he is accomplishing his goal, as well as attaining the satisfaction of completing the tasks assigned with some success.

Individual instruction or small group instruction. Instruction in shops and in classrooms is primarily individual instruction. The student progresses through the course of study at his own rate of speed, developing job intelligence and skills according to his capacity. When and if possible, instruction of small groups which are at about the same level, will take place. A happy combination of group and individual instruction is most advantageous for both student and instructor. Individual instruction, which allows each student to progress at his own pace, means that the student competes against his own past experience rather than against the abilities of his neighbors in the class. A situation which permits individual progress with no unhealthy competition from a fellow student, is good mental hygiene in action. The big problem from the instructional point of view is student motivation, and acquisition of quality standards of workmanship.

A positive rather than negative teacher supervision of the student. The instructor who assists the student to develop initiative in his work, who inspires the student to try experimental work, who anticipates and instructs the student before serious mistakes are made or before the problem becomes too involved, is the instructor who gives positive supervision. An instructional approach which permits the development of initiative, originality, self-discipline, good judgment, and job intelligence is a most essential technique for good mental hygiene practice.

A friendly, cordial atmosphere created by principal and teachers. A spirit of friendliness, cooperation, interest, and sincerity toward the student will help to foster development of desirable student-teacher relationships. An atmosphere in which the student feels secure and well-adjusted toward his fellows, and in which he can enjoy himself, is an ideal atmosphere.

Student government and student self-discipline. A school which offers an opportunity for student government and self-discipline is one in which students can assume some responsibility for their own well-being and participate to a large degree in planning school activities. A school in which principal and teacher-student cooperation is an integral part of the school program has better attitudes and sounder rapport between student body and faculty.

A variety of extra-curricular offerings. Adolescence is a period of growth during which the individual is particularly interested in belonging to a group, in having the ability or skills to do as his fellows do, and in knowing that he contributes to his group and has a place in it. The companionship of the group is a major need. An outlet is extra-curricular activities such as sports, clubs (not fraternities or sororities) designed for purposeful activity such as photography, printing, good grooming, cookery, interior decorating, etc. Such club activity gives students opportunity to feel they belong to a group to cooperate within a group, to feel part of a larger organization, to develop leadership qualities, to develop interest in worthwhile activities suitable for leisure time, and finally to develop social relationships with their own age group. At present the junior high school age group benefits most from such activities. Senior high schools, in general, do not organize activities so that every student participates. A vocational school is particularly in need of a large number of extra-curricular activities to encourage active participation of the whole student body, together with the opportunity to meet, know, and learn to get along with a variety of individuals.

A report card which analyzes the student's success in terms of accomplishment versus his own ability and not comparison with the ability of others is highly desirable. In the past, report cards measured accomplishment not in terms of what the student accomplished in relation to his own innate abilities, but measured his accomplishments in terms of those who exceeded or fell below him. This measurement ignored innate abilities, family background, individual maturity, and personality, and all the individual differences which make the end result differ in degree for each of us. The student whose accomplishment is measured against his own capacity, his drive, his interest and attitudes, receives a fair measuring mark for his work, not one which is a comparison with the work of others. This type of report card which does not involve comparison with fellow students is good mental hygiene in action. A report card which indicates growth of personal characteristics and attitudes is also a step toward good mental hygiene practice.

A cordial intelligent understanding of the school program by parents is needed. If parents know the purposes and objectives of the school program they are much more likely to give it intelligent support, to interpret it to their own children with more understanding and to cooperate with the principal or teachers when cooperation is needed. Harmonious parent-school relationships will be reflected in student attitudes and relationships in the school society.

A constant interpretation of the school program to the parent is desirable. Development of a healthy, sound, school-parent relationship is primarily the responsibility of principal and faculty. An understanding, sympathetic, and intelligent parent group can be developed by continuous work on the part of the school personnel.

Teachers who understand the needs of the whole student personality in terms of physical, social, and emotional needs. Teachers who understand the cycle of growth of the individual in its physical, social, and emotional aspects should have a much better understanding of the needs of the group they are instructing. In the light of this understanding, they can provide for healthy student growth in a friendly, sympathetic atmosphere, which will provide ways and means of fulfilling the social and emotional needs of adolescent students.

Teachers must have a good background knowledge of community conditions and of the individual families of their students. Knowledge of this kind adds immeasurably to the teacher's understanding of the student's needs in terms of what his home and community background does or does not provide. This increased knowledge and understanding should also lead to broader understanding in both instructional material and in student-teacher relationships.

Teachers must themselves be well-adjusted, emotionally mature people. The teacher who is well-adjusted to his environment, whose basic personal needs are satisfactorily provided for, is a happier person than one who is not well-adjusted. The teacher who leads a reasonably satisfactory "after school hours" life, with many happy social and emotional experiences, is far less likely to appear in his classroom with a biased outlook on life and to accept more readily the demands which teaching makes. His influence on his students will be more wholesome than the influence of a maladjusted personality.

Adequate cumulative records of each student's achievements, scholarship, social attitudes, special characteristics, and health should be available for the teacher's consultation and reference as needed. Such a record or series of records should follow the student throughout his school career. They should not be used indiscriminately. The principal must be sure that the teacher can interpret correctly what he finds in these records and that he has a real need to use them in helping the individual. If correctly assembled, they can be of untold value to principal, counselor, nurse, and instructor in leading to a better understanding of the student and can assist in good mental hygiene practices.

A guidance counselor with a sound background in psychology, psychometric measurement, and mental hygiene, who likes, understands, and can assist the student needing educational, vocational, social, and emotional guidance, is a tremendous asset to a school. He should not spend time on disciplinary cases.

Attractive classrooms and shop areas are essential. Much has been written on the psychology and psychological value of color in public buildings and institutions. The nursery school and elementary school have lead in pioneering in the use of color for room decoration. Cheerful classrooms, shops, and corridors provide an atmosphere much more in keeping with good mental bygiene practice than the drab, monotonous colors usually found in the schools. Machines painted in at least three colors, assist in safe practices and add to the feeling of security in handling the machines. Movable furniture, sufficient supplies and equipment for student participation in activities, contribute to healthy attitudes and relationships.

Health examination and school nursing service. A carefully-planned, well-developed procedure of annual examinations is essential to a well-organized vocational-technical school program. Such examination will permit the school to know the physical limitations and liabilities of the student in terms of his ability to study in certain shop areas. It will also provide an opportunity for giving the student a thorough examination and a report to his parents with suggestions for remedial health work through the family physician, if necessary. Many students will discuss problems with a nurse which they would not mention to any other member of the school organization. The nurse, in many instances must perform counseling duties.

Conclusion. To create desirable social and emotional attitudes easily adjusted to a rapidly changing world, we need vocational-technical schools in which the stage is set for free development of the individual in relationship to his group, with opportunities to make desirable, honest contacts with the world outside the home, and opportunities for spiritual growth; thus guided by teachers of vision and understanding, students may be well-prepared to face the problems of world living with good balance and security backed by sound mental health. A well-rounded and carefully developed program which permits the practice of good mental health will aid them when they leave the school.

H.R. 140. A bill to authorize appropriation of funds to assist states and territories in more adequately financing systems of public education and in reducing inequalities of educational opportunities in public elementary and secondary schools. To committee on *Education and Labor.*

H.R. 156. To authorize appropriation of funds to assist in reducing inequalities of educational opportunities in elementary and secondary schools. To *Education and Labor.*

H.R. 254. To authorize Director of Office of Vocational Rehabilitation to encourage, foster, and assist in development, establishment, and maintenance of special services and facilities for handicapped persons. To *Education and Labor.*

H.R. 537. To repeal Hatch Act. To *House Administration.*

H.R. 573. To create executive department of government known as Department of Health, Education, and Security. To *Expenditures in Executive Departments.*

H.R. 664. To provide military or naval training for all male citizens 18 years of age. To *Armed Services.*

H.R. 867. To amend Veterans Regulation No. 1 (a) to prevent certain payments to educational or training institutions which pursue a policy of discrimination. To *Veterans Affairs.*

H.R. 877. To authorize program for construction of county agricultural buildings through assistance in planning and financing such projects in counties where

(Continued on page 35)

Chicago Museum of Science and Industry Selected for Exhibit

Industrial Arts Fair In Chicago Museum

THE Museum of Science and Industry in Chicago has been obtained for the First National High School Industrial Arts Fair, which will be held from August 17 to September 7 this year.

Located on scenic Lake Shore Drive, it is easily accessible by car and there is ample parking space. From Chicago's Loop, it is a 20 minute I.C.C. train ride.

Probably the most outstanding science and industry museum in the world, the Chicago museum is an ideal place for the Scholastic Industrial Arts Awards exhibit. It consists of three great pavilions measuring more than 1,000 feet in width, is a reproduction in limestone of the Fine Arts Building of the World's Columbian Exposition of 1893, and is considered one of the finest examples of classical architecture in the world.

The Industrial Arts Fair will be given more than 6,000 square feet for the display of work of high school students. A special designer has been engaged to organize the exhibits, protect them against any damage or loss, and show each piece of work to best advantage. More than 450 exhibits in the 15 classifications will be on display after selection by panels of distinguished leaders.

Housed in the huge structure are many spectacular and intensely interesting displays, from stage coaches to replicas and originals of famous locomotives. There is a coal mine where visitors descend the shaft and board a mine train which carries them to the working coal face. There is a farm which contains full-sized representations of the home, barn, silo, etc. General Motors, Bell Telephone, RCA, and International Harvester have installed exhibits. Many "working exhibits" in which machinery starts to operate with the turn of a switch, demonstrate industrial processes.

Public and private school groups regularly visit the museum exhibits, and hear the lectures. Visitors to the National High School Industrial Arts Fair will find many of these attractions of great interest. The dates selected for the fair allow industrial arts teachers in areas distant from Chicago to come in August before their school opens, and see the work of students from all sections of the country. By extending the Fair into September, it is possible for teachers in the Chicago area not only to visit the exhibit themselves, but to bring their classes. Both students and teachers should benefit from this opportunity to see the work of others.

Exhibits should be sent directly to Chicago, addressed, "Scholastic Industrial Arts Awards, Museum of Science and Industry, Jackson Park, Chicago, Ill." If additional copies of the Rules Booklet are needed, they can be obtained from Scholastic Magazines, 220 E. 42nd St., New York 17, N. Y.

The inscription in the Central Rotunda is one which industrial arts students and teachers will find applicable to them, and will accept as a universal truth:

"Science discerns the laws of nature.
Industry applies them to the needs of Man."

Mass Sales Training

NOVEMBER 13, 1945 is an historic date to the confectionery industry, for it marked the beginning of the first nation-wide effort of any industry to coordinate a mass sales-training movement. On that day the first balanced selling test class for wholesalers' salesmen, taught by Forest Lawton the supervisor of distributive education in Baltimore, Maryland, convened.

This class of 20 enrolled salesmen represented the culmination of more than two years of cooperative effort by the trade's manufacturers and wholesalers under guidance of the distribution committee of the National Confectioners' Association, an effort which "shifted into high" with the appointment of James F. MulCahy as association merchandising director. The active cooperation of the U. S. Office of Education was next obtained. G. Henry Richert, program planning specialist, Business Education Service, worked with Mr. MulCahy and they have co-authored the ten class instruction units and a teacher's manual which are the text of the test class. These ten units, which later will be given in sessions spread over the necessary time required, are based on information gained from a Detroit survey of wholesalers' merchandising practices, made by the National Confectioners' Association in 1943 for the normal business year of 1940-41.

The method and means of conducting the sales training classes throughout the nation will supplement the U. S. Office of Education's present organizational pattern. In all of the 48 states there are state supervisors of distributive education. To set up the program and give the supervisors assistance from the industrial side, the national association has set up an organization which includes advisory-coordinators and representatives. At the area level, one sales manager represents manufacturers and one wholesalers, to work with people in the states of their trading area. In each state there will be representatives of manufacturers who have good relations with the wholesalers in their state. These men will be the sparkplugs in their states for the program, under supervision of the association.

At the end of the course, each wholesalers' salesman completing it will be awarded a certificate of credit. The policy whill be "select group" classes of only jobbers and their executive force.

Luncheon at AVA convention for supervisors and confectioners

Preventive Maintenance

(Continued from page 5)

necessary then, but the present emphasis is on preventative maintenance. The tractor has many items that require daily attention. The care and service of the cooling systems, spark plugs, oil filter, air filter, lubrication including the changing of oils, crank case, transmission and differential, carburetor, tires, tension on the fan belt, tappets and magnets are of primary importance. It also is important to recognize the need for a major repair job, when small repairs will no longer keep a machine going properly.

Care of the cooling system may seem an unimportant part of the daily care of the tractor. However, care of the thermostat and ventilators and keeping water at the proper level will keep the tractor operating efficiently. In cold weather it is necessary to protect the machine by housing or antifreeze.

The farmer should keep an extra set of spark plugs on hand. In this way he can remove faulty plugs from the motor, take them where there is a spark plug cleaner and tester, and have them ready with certainty that they will perform efficiently on short notice. Oftentimes faulty plugs will show up even though cleaned and points adjusted, when in operation.

The oil filter will not need to be changed every day, but the device should either be cleaned out or a new cartridge inserted periodically, to keep out carbon and other foreign matter.

BECAUSE of the dusty conditions found in practically all field operations where the tractor is being driven, there is need of regular servicing of the air filter. Lubrication is a daily task and sometimes it may be necessary to even lubricate twice a day where conditions warrant it. Lubrication means more than merely greasing a machine or tractor. The choice of the proper type of lubricants is as important as proper application. Wheel bearings, fan-pulley bearings, etc., require a different type of grease than other parts of the chassis. The crank case, even though there is an air filter and oil filter on the tractor, will need to be changed when the oil becomes laden with carbon or dirt. The transmission and differential should be drained and refilled to the proper level seasonally. The proper adjustments of the carburetor, for not only power in the machine but for economical use of fuels, should be made. While the magneto should not be overhauled by the operator, it may be necessary to time it with the rest of the engine as well as to check the gap in the breaker points. Also, brushes become broken and can easily be replaced by the operator.

Tappets must be adjusted at least monthly, and a chart referred to for the spacing they should receive.

Tires should be inspected daily for the proper amount of air. If water or liquid is used as weight in the tire, it may be necessary to apply antifreeze with the liquid to keep the tire from breaking.

Preventative maintenance or care is probably the most important thing a farmer can do to his farm machinery to lengthen its life and get better operation.

College to Community

(Continued from page 9)

four-year high school; the parent-teacher group is cooperative and active; about one-half of the high school graduates go to college and half marry and settle in this or nearby communities; the school has $5,000 earmarked for a new homemaking department.

IN meeting with the council, the entire group discussed the function of homemaking education. They were agreed that the homemaking teacher should furnish the leadership but that every teacher, home, and organized group in the community should be concerned and lend support to improving the home life of the community. It was pointed out that nutrition, human relationships, and pride in one's home were problems to which teachers might give attention at all levels and that high school homemaking students as well as the teacher might promote and assist with the realization of such objectives in other classes and at other levels.

An invitation was extended to a larger number of boys and girls and adults to attend the second community meeting. At this time four small groups were organized to discuss the specific curriculum problems relating to homemaking education at the lower high school years, the upper years, for boys and adults.

BOYS saw a need to know about nutrition, to buy more wisely, to be better groomed, to be more at ease in social situations, to understand children, and to get along better with their families. Their great concern, however, was more adequate recreational facilities within the community. To this group, this problem was immediate and second to none. They were extremely impatient with adults who would not trust them to use and respect the gymnasium. At the same time they admitted frankly that when adults expected bad behavior they sometimes deliberately lived up to those expectations. The teachers who met with this group agreed that these young people were eager for assistance and that they had tremendous possibilities for good, but needed understanding and help.

THE last meeting was devoted to summarizing the facilities of the school, the relationship of the school to the community, the function of homemaking education in the total school program, and some specific suggestions concerning the department and its equipment. All who had participated in any way in the program were invited to this meeting. Following the formal session the PTA entertained the workshop group at an informal social hour. Supt. Galbreath announced the completion of preliminary plans for developing a soft ball playing field. This had come as a direct result of the boys' discussion at the previous meeting. Before the ball field was finally opened, the project was expanded to include facilities for day and night, and year-around sports.

The workshop had truly gone to the community but the community also had contributed to the growth and development of each member of the college group for they had experienced the privilege of seeing a community become conscious of itself.

Practical Teacher Training

FRED H. WESTBERG
State Supervisor of Distributive Education, Washington

WASHINGTON State teachers, coordinators, and supervisors of distributive education experienced what was to them a new approach to teacher training during the past summer. It was so successful that the program may be made a regular feature of the teacher training system in distributive education.

In spite of substantial trade experience and knowledge of merchandising theory, distributive education instructors have felt the need of teacher training in the basic procedures of conducting a retail business. A highly satisfactory three-weeks training program was arranged on the campus of the University of Washington, under the direct supervision of the Washington State Board for Vocational Education.

An off-campus department store, owned by the student body of the University, was used as a training laboratory. The University Bookstore, as it is called, proved to be admirably adapted for the study since it has well-organized and profitable departments handling women's sports wear, men's sports clothing, athletic equipment, kodaks, radios and records, and a gift and cosmetic section handling exclusive lines, in addition to the usual student supplies. The combined sales of these departments exceed one million dollars annually.

The manager of the University Bookstore served as instructor. Aided by members of his staff, he undertook the assignment with a zest and earnestness which influenced every member of the group to be personally interested both in the course and in the operation of the store.

A text book on retailing was selected which covered store organization, ordering, buying and receiving merchandise, pricing goods, merchandise budgeting and control, inventory, expense control, and sales promotion. The instructor explained each topic with great thoroughness and members of his staff assisted by discussing the nature of their departments. The store's records, reports, and plans were made available. Class members spent approximately one-fourth of their class time in the store interviewing department heads and sales people, making job analyses, and studying store practices. In place of reports and long reading lists, as much free time as possible was spent in becoming acquainted with the staff and store operations. Questions, group discussion, and a free interchange of ideas characterized each class session. At the conclusion of the three weeks, all could discuss merchandising problems with confidence.

To reciprocate in a small measure, a four-meeting evening course was conducted for the staff of the store on business personality training. A member of the distributive education group served as instructor, the store staff were the enrollees, and members of the teacher training group observed proceedings.

The Vocational Outlook

★ North Carolina held a series of audio-visual aids institutes last fall to assist teachers in the use of films as teaching aids. Representatives of DeVry Corp. discussed various types of aids and gave demonstrations of each.

★ Harlem Vocational High School, New York City, has opened a new floristry shop, established in cooperation with members of the industry. Flowers will be purchased in the wholesale market and students will learn cutting, arrangement, merchandising, display, and selling.

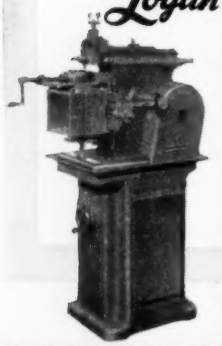
★ A state home economics advisory committee which will help interpret the state program and assist in its development, has been organized in Idaho. School lunch workshops for lunchroom workers were held at six centers.

★ *State Supervision of Industrial Arts,* the new American Vocational Association leaflet, was made available for general distribution just prior to the AVA convention in St. Louis. It contains suggestions for officials responsible for selecting and directing state supervisors of industrial arts and will guide and assist newly-appointed state supervisors to determine their duties and discover ways and means of meeting them.

★ An "Idea Exchange" has been developed by the Arizona home economics department to assist teachers of the state.

Logan

A NAME TO REMEMBER WHEN YOU THINK OF BETTER LATHES AND SHAPERS



BRIEF LOGAN SHAPER SPECIFICATIONS:
Length of ram travel, 7⅝" . . . strokes per minute, "Anyspeed", 64 to 175 . . . length of bearings, main frame, 10" . . . length of ram, 16⅛" . . . width of ram, 5" . . . table traverse, 10½" . . . table vertical travel, 5½" . . . table length, 8" . . . table width, 8" . . . table depth, 1½" . . . saddle bearing, 6" . . . toolhead travel, 2⅝" . . . toolhead swivel, 360° . . . toolhead diameter, 4" . . . Cross feeds, 6 (.002, .004, .006, .008, .010, .012) . . . Sprocket and chain drive . . . vise 5"x5"x1½" . . . motor, ½ hp, 1750 rpm . . . Belts, "A" Belt, V-type . . . floor space, 14"x19" . . . Height over all, 51" . . . Shipping weight, shaper, stand and motor, 535 lbs.

NEW LOGAN 7-INCH SHAPER

COMBINES EXTRA CAPACITY . . . WIDE RANGE OF FEEDS AND SPEEDS . . . SMOOTH POWER . . . LASTING ACCURACY

The Logan Shaper is built by the same organization which engineers and builds the Logan Lathe. The shaper is all steel and cast iron, with no die castings. Its maximum stroke of 7⅝" permits full machining of work 7½" long. Quickly set up to handle all types of straight cuts, angular cuts, squaring, machining and slotting operations at any speed between 64 and 175 strokes per minute. Speed can be changed instantly, without stopping motor or shifting belt. Ram is micro-set by a simple screw adjustment. Six automatic feeds in either direction from .002 to .012. Tool head may be swiveled 360° and instantly re-set to center by means of tapered locating pins, an exclusive Logan feature. Extra heavy cast iron crank plate puts ample power behind every stroke and eliminates chatter. Roller type chain drive further assures positive, slip-proof operation. Write for full information. N-4

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★ A. L. Teachey, state supervisor of veterans farmer training programs in North Carolina, reported more than 4,200 former members of the Armed Services in training last fall, with the number increasing each month. Both white and Negro teachers are engaged in this training in local schools. There are 440 departments of vocational agriculture in the state.

★ A plan to staff high schools, including vocational schools, in Poland with professional books, journals, texts, yearbooks, etc., has been developed by UNRRA. Packages should be securely wrapped, should contain a card with the name and address of the school sending the material, and should be addressed as follows: *Polish Supply and Reconstruction Mission, c/o UNRRA, Interboro Storage Co., 406 Greenwich St., New York City. Attention Polish Ministry of Education. Return address should be on the outside of the box.*

★ Establishments with registered apprenticeship programs in the skilled trades in the U. S. increased from 25,000 at the end of September, 1945, to 68,000 at the same time in 1946, or more than 164 per cent, according to William F. Patterson, director of Apprentice-Training Service, U. S. Department of Labor. There are 83,429 apprentices in the building trades alone, an all-time high.

★ The U. S. Armed Forces Institute has eliminated all studies above the college freshman level. It will continue to supply material for students at the elementary, high school, and first year college levels.

★ Veterans Village, California Polytechnic Institute in San Luis, Obispo, has 75 movable one- and two-bedroom houses, and a trailer community of 75 units for 125 veterans' families. A homemaking education program for wives has been developed.

★ South Dakota started the school year with 21 active departments of vocational agriculture and by the end of 1946 had 30, with applications pending.

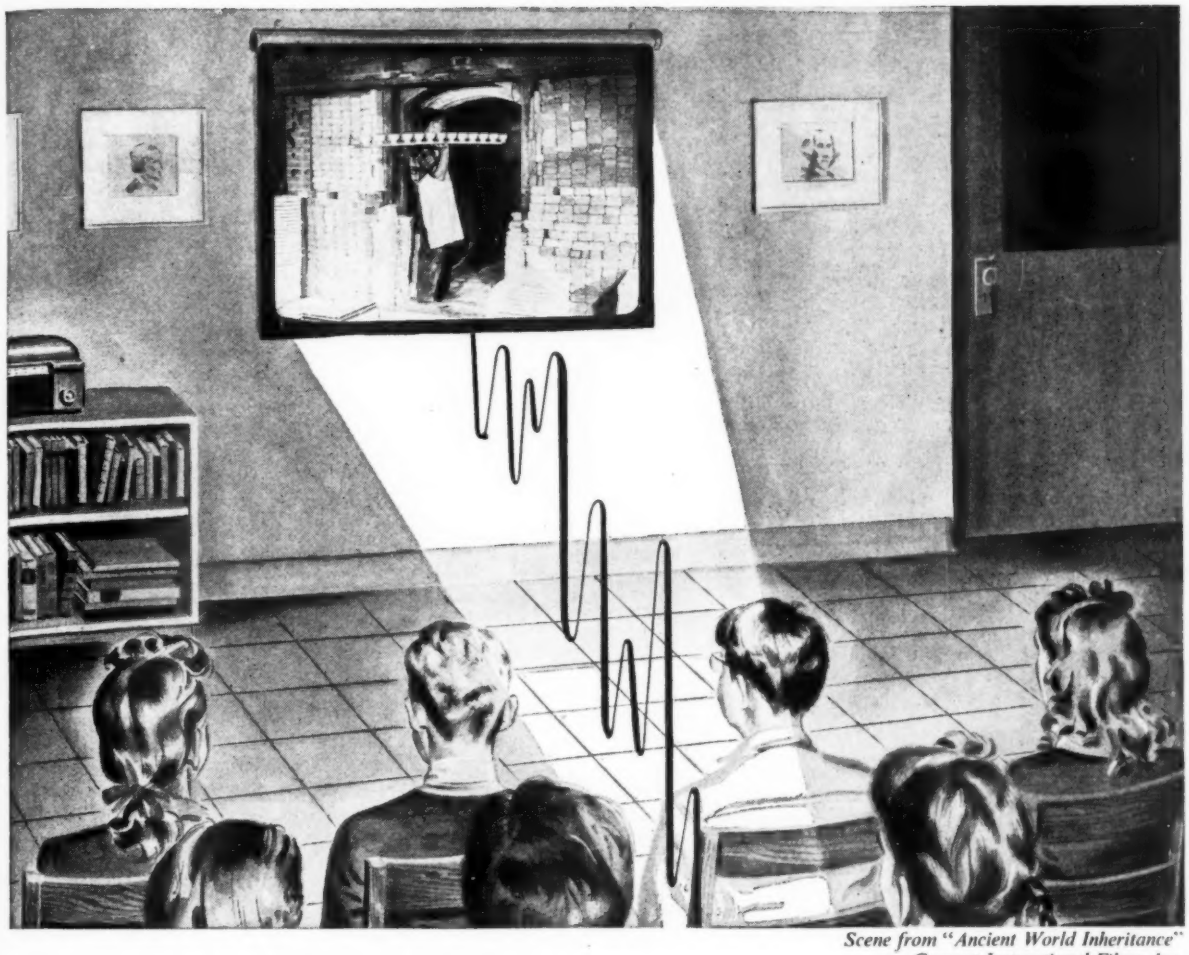
★ A large backlog of demands for radios and household appliances is attracting new businesses in this field.

★ Twenty-one courses in distributive education are being offered in St. Louis this year. A considerable number are offered in the evening schools and others are given in centers in downtown St. Louis, sponsored jointly by the Associated Retailers of St. Louis and the Board of Education.

★ The motor court has become a multi-million dollar industry in the U. S. It is estimated there are approximately 20,000 establishments with an average of 22 rooms to a court. A travel boom which shows no signs of abating, is expected to keep the industry at a high level for some years.

★ A new company, United World Films, Inc., a subsidiary of Universal Pictures Co., Inc., has been formed to produce and distribute 16mm and 8mm entertainment films. The Filmosound Library of Bell & Howell Co., has been purchased.

★ A National Association of State Directors of Veterans Affairs has been formed with Homer G. Bradney of Illinois first chairman. C. C. Horton, Alabama, is vice chairman and Joe Darwin, Louisiana, sec.-treas.



Scene from "Ancient World Inheritance"
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SOUND FILMS play vital role in teaching the "One-World" concept

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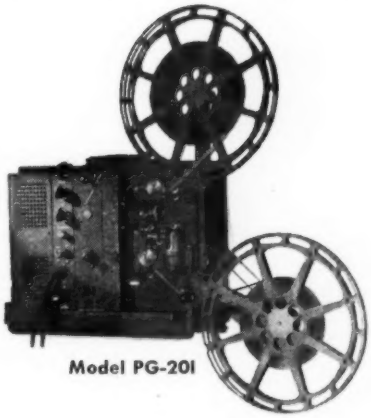
RCA's 16mm Sound Film Projector shows educational films with professional standards of picture definition. Its silvered pyrex reflector and "coated" lens provide a maximum of screen illumination. The sound system of the RCA Projector is engineered to reproduce sound which has all the fidelity of the original recording.

Simple to operate the RCA Sound Film Projector assures the very best presentation of all 16mm educational sound films.

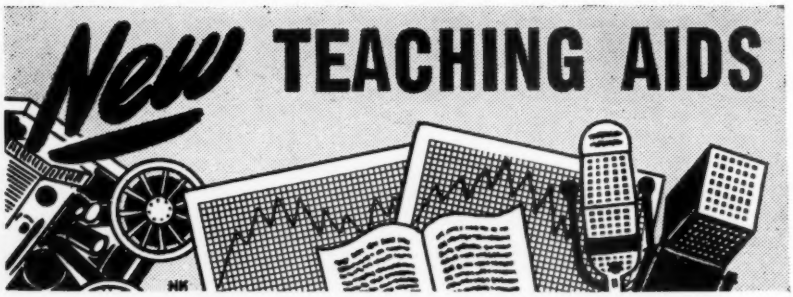
For complete details address Educational Department, Radio Corporation of America, Camden, N. J.



Model PG-20I

RADIO CORPORATION of AMERICA

EDUCATIONAL DEPARTMENT, CAMDEN, N.J.



CHARTS

Drill Presses, Circular Saws, Power Trucks, Engine Lathes, Woodcutting Band Saws, Grinding Wheels, Metal Shapers, Ladders, Wrenches, Arc Welding Equipment, Low Voltage Electric Equipment, Screw Drivers, Punch Presses, Gas Welding and Cutting, Hand Trucks, Hammers, Traveling Cranes, Scaffolds, Metal Shears and Brakes, Freight Elevators, Cold Chisels, Electrical Hazards —for the Electrician, Compressed Gas Cylinders, Jointers and Planers —Wood. Industrial Safety Charts, U. S. Department of Labor, Washington, D.C. Address Superintendent of Documents. 5¢ each.

FILMS

Motion Pictures and Slide Films for School Use. School Service Department, Westinghouse Electric Corp., Pittsburgh 30, Pa.

A catalog listing films available to schools free, except for transportation costs.

Empic Movie Guide. Published the 15th of the month by Electrical Manufacturers Public Information Center, 155 E. 44th St., New York 17, N. Y.

Volume 1, Number 6, lists the following 16mm motion pictures, all sound except one: *Design for Arc Welded Structures, Looking Through Glass, Modern Coal Mining, Freedom Rides on Rubber, Voices in Paper, Sand and Flame, Open-Pit Copper Mining in Chili, Steel—Man's Servant, Nickel and Nickel Alloys, Unfinished Rainbows, Aluminum* (silent), *Magnesium—Metal From the Sea, Steel, Methods of Processing Plastics Materials, This Plastics Age, Bouncing Molecules, Manufacture of Copper, Brass, and Bronze, Excursions in Science.*

Beauty for Keeps. 16mm sound. For showing in schools write S. C. Johnson & Son, Inc., Racine, Wis., or Modern Talking Picture Service, 9 Rockefeller Plaza, New York 20, N. Y.

History of wax and multiple uses in modern protective housekeeping, are shown.

Comeback. 16mm sound and color. 26½ minutes. Office of Vocational Rehabilitation, Federal Security Agency, Washington, D. C.

The picture shows the rehabilitation of civilians and is distributed through state divisions of vocational rehabilitation to employer, civic, educational, welfare, labor and other groups.

A Nation's Meat, Livestock and Meat, By-Products, Cows and Chickens ... USA, Meat Buying Customs. 16mm sound. Swift & Co., Agricultural Research, Union Stock Yards, Chicago 9, Ill.

All films are available for showings to educational organizations at no cost except express charges.

How to Make a Good Impression. 16mm motion picture, sound and color. Loans from Harris-Seybold Co., Cleveland, Ohio.

An elementary, non-technical story of the differences between lithography, letterpress, and gravure in the printing business.

Everyday Miracles. 16mm sound motion picture, 25 min. Modern Talking Picture Service, 9 Rockefeller Plaza, New York 20, N. Y. Free.

A dramatization of the story of the world's hardest metal, Carboloy cemented carbide.

Command Performance—How phonograph records are made, how they convey sound. *Unseen Worlds*—Begins with the first microscope and reveals newest electronic devices. *Electrons on Parade*—A diagrammatic explanation of the electronic vacuum tube with details of manufacture. *Facing Tomorrow* — How home service committees work in Red Cross Chapters to aid veterans. *Nursing Begins at Home*—Demonstrates simple procedures. *If the Shoe Fits*—Analyzes each step in manufacturing shoes. *Bound to Last* —Shows how work is done in the Government printing plant. *Rubber Insulated Cables*—Shows the various processes in making rubber insulated cable. All 16mm sound films obtainable on a free loan basis from the Institute of Visual Training and the Motion Picture Distributing Office of the American Red Cross, 40 E. 49th St., New York 17, N. Y.

Introduction to Accounting, The Accounting Cycle, How to Balance Accounts, The Journal, Posting, Controlling Accounts. 35mm silent filmstrips. Business Education Visual Aids, 330 W. 72nd St., New York, N. Y. $5 each or rent, 50c per week. Rentals only within 1,000 miles of New York City.

Present a variety of bookkeeping situations in detail as supplements to accounting text.

BOOKS

Industrial

Hand Wrought Ironwork, by Edward F. Krom and Peter J. Paige. The Bruce Publishing Co., Milwaukee, Wis., 1946. 111 pages, $2.50.

The book contains 47 wrought iron projects any home craftsman can make from inexpensive materials and with few tools.

Selective Job Placement, by Tobias Wagner. The National Conservation Bureau, 60 John St., New York 7, N. Y., 1946. 151 pages, $2.50.

The book defines the method of placing workers to obtain maximum efficiency, both from the worker's and employer's standpoint.

Precision Hole Location for Interchangeability in Toolmaking and Production. The Moore Special Tool Co., Bridgeport, Conn., 1946, 448 pages, $3.00 within the metal-working industry and $3.50 elsewhere.

The book is a comprehensive review of all hole location practices; contains 400 photographs and 184 pages of tables.

Communication Through the Ages, by Alfred Still. Murray Hill Books, Inc., New York, N. Y., 1946. 201 pages, $2.75.

An historical account of the scientific background of communication and a review of the progress of man and his philosophies as related to this expansion.

Automotive Mechanics, by William H. Crouse. McGraw-Hill Book Co., New York, N. Y., 1946. 673 pages, $3.60.

A text covering all phases of automotive mechanics, emphasizing the fundamentals and also giving a clear understanding of the construction, theory of operation, testing, adjustment, repair, and maintenance of automobiles.

Mechanical Drawing, by Fred Nicholson. D. Van Nostrand Co., Inc., New York, N. Y., 1946. 211 pages, $2.00.

The methods of teaching and problems for practice are designed to bring the drafting room of industry into the school room.

Plastic Craft, by Ernest DeWick and John H. Cooper. The Macmillan Co., New York, N. Y., 1946. 184 pages, $5.00.

How-to-do-it instructions for hundreds of useful and decorative articles that can be made in a home or school shop.

Home Economics

It's Your Home, by Lewis, Banks, Banks, Borgeson, and Peckham. The Macmillan Co., New York 11, N. Y., 1946. 192 pages, $1.00.

Contents include personal adjustment in the home and community, selection and care of clothing, choice and preparation of food, budgeting, and home management.

Guidance

Careers in Science, by Philip Pollack. E. P. Dutton & Co., Inc., New York, 1946. 222 pages, $2.75.

Information on the entire field of science, and the broad divisions of scientific endeavor as offering job opportunities.

General

Three Worlds, by Nicholas S. Timasheff. Bruce Publishing Co., Milwaukee, Wis., 1946. 263 pages, $2.75.

A discussion of three social orders, Communism, Fascism, and Democracy.

When it's modeled

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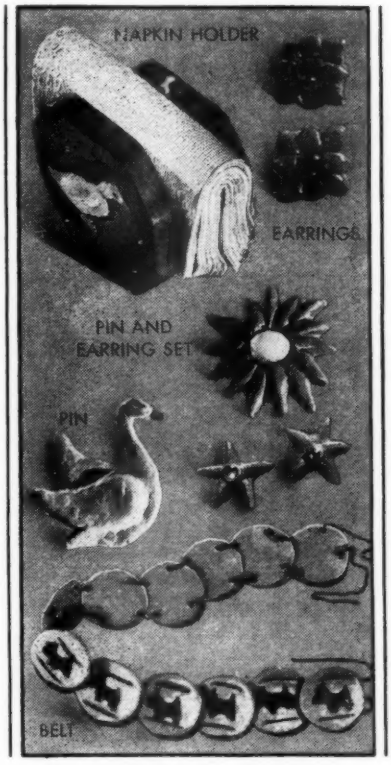
it's Permanent!



THE OBJECTS SHOWN in the panel were modeled with PLASTIC WOOD by students in the 7th, 8th and 9th grades in the Herron Hill Junior High School, Pittsburgh, Pennsylvania.

As the result of a search to discover a low-cost modeling medium PLASTIC WOOD was selected as ideal for the purpose. No preparation between classes was necessary. The modeled articles had a permanent quality.

THE TEST COURSE was conducted over an 8-week period at the Herron Hill Junior High School, using simple items available in every home—such as flexible wire, paper clips, small boxes, coat hangers, beads, felt, colored cords and safety pins.

● *Designs were just drawn on cardboard, either by tracing or free hand. PLASTIC WOOD was then added in thin layers as the modeling progressed. In fashioning the belt the following steps were taken. First, the design was drawn on a cardboard milk bottle top or a similar piece of cardboard; second, PLASTIC WOOD was applied in a thin layer to the underneath or backside of the disc; third, PLASTIC WOOD was modeled in a thin layer around the design; and fourth, the design itself was modeled in relief with PLASTIC WOOD.*

● *The holes through which the thin leather thongs are laced, to hold the discs together, were made with a pin or a piece of wire while the PLASTIC WOOD was still soft. When dry, each section was sandpapered to a smooth finish, painted and decorated. Any type of paint, nail polish, aeroplane "dope" or varnish is practical for a bright, colorful finish.*

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So You Were Elected! by Virginia Bailard and Harry C. McKown. McGraw-Hill Book Co., New York, N. Y., 1946. 264 pages, $1.80.

Designed to give students an understanding of the qualities needed for successful student leadership.

Readjustment or Revolution? by A. H. Edgerton. Whittlesey House, New York, N. Y., 1946. 238 pages, $2.50.

The book presents information on how to deal with situations confronting veterans, workers, and students confronted with readjustment problems.

After Hitler Stalin, by Robert Ingrim. Bruce Publishing Co., Milwaukee, Wis., 1946. 255 pages, $3.00.

The book traces back Sovietism to the French Revolution.

Jewelry Making and Design, by Augustus F. Rose and Antonio Cirino. Davis Press, Inc., Worcester, Mass., 1946. 221 pages, $8.95.

A handbook for beginners and skilled craftsmen with essential information about designing and making jewelry.

The Preparation and Use of Visual Aids, by Kenneth B. Haas and Harry Q. Packer. Prentice-Hall, Inc., New York, N. Y., 1946. 224 pages, $4.00.

Designed to show the way to greater effectiveness and efficiency in personnel training, sales demonstrations and displays, educational programs and advertising. Helpful suggestions for use of visual aids in all training programs.

Paper Covers

Course in Carpentry, a Workbook for Apprentices in the first year, and *Tests to Accompany Course in Carpentry.* California State Department of Education, Sacramento, Calif., 1946.

Occupational Briefs on America's Major Job Fields. Science Research Associates, 228 S. Wabash Ave., Chicago. 1946. 4 pages ea., 15¢ ea.

No. 151, Fashion Designers; No. 153, Building Contractors; No. 155, Horse Breeders and Trainers; No. 156, Salvage Workers; No. 157, Airport Managers; No. 158, Social Scientists; No. 159, Direct Mail Advertising Workers; No. 160, Owning Your Own Retail Shop; No. 161, Scientific Glass Instrument Makers.

Retail Job Analysis and Evaluation. George Plant and John B. Pope. Store Management and Personnel Groups, National Retail Dry Goods Assn., 100 West 31st St., New York, N. Y.

Plastics Handbook. Carmen-Bronson Co., Mount Vernon, N. Y., 1946. 10¢.

Techniques That Make the Vocational Library a Useful Counseling Tool. Marguerite W. Alexander. American Red Cross Vocational Counseling Service, St. Louis, Mo., 1946. Free.

The Concept of Vocational Education in the Thinking of the General Educator, 1845 to 1945. Bureau of Educational Research Bulletin No. 62, College of Education, University of Illinois, Urbana.

Establishing and Operating a Retail Feed and Farm Supply Store. U. S. Department of Commerce, Washington, D. C., 1946. 15¢.

Business Paper Accounting. Published and distributed by Cost Committee of The Associated Business Papers, Inc., New York, N. Y., 1946. Free.

Citizen Farmer. Arlyne M. Plumb. Department of Education, National Farmers Union, 3501 East 46th Ave., Denver 16, Col., 1946. Free.

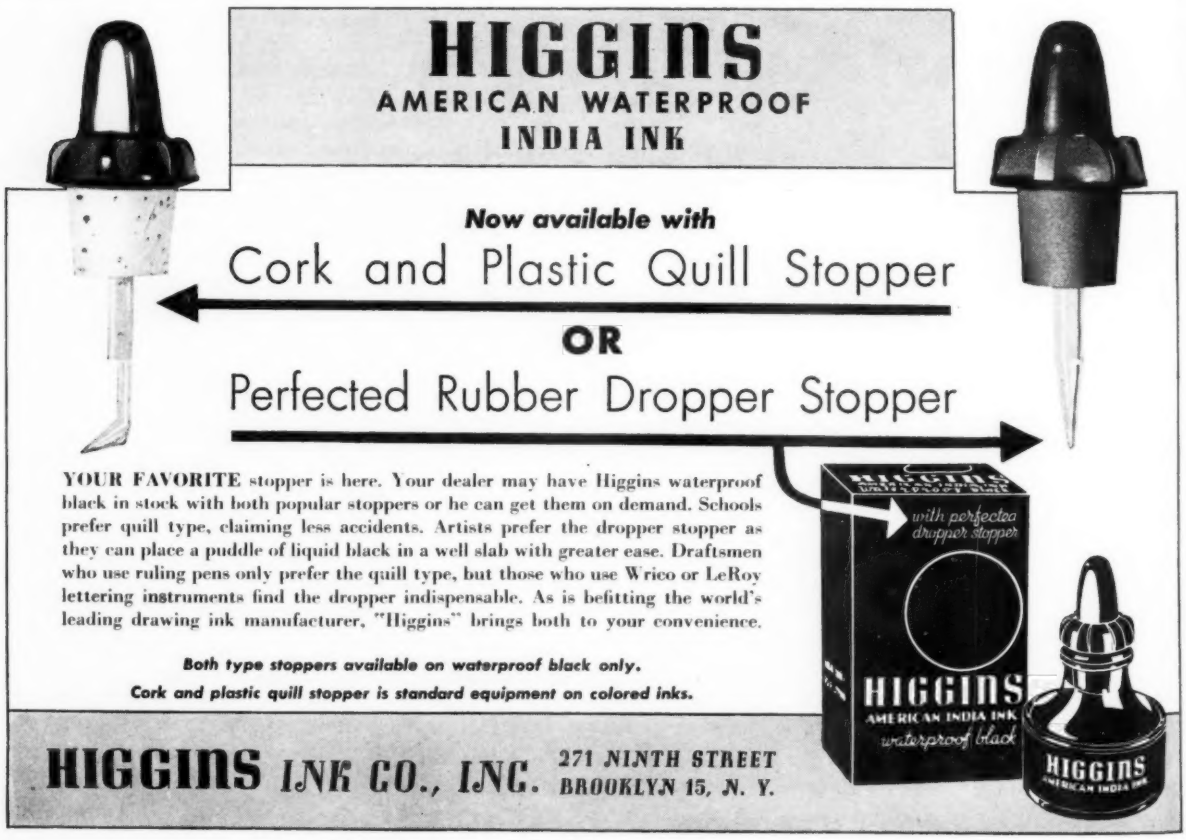
Rehabilitation of the Tuberculous. Proceedings of Conference, National Tuberculosis Association, New York, N. Y., 1946. $2.00.

Cutting Paper Sculpture. Paul McPharlin. X-Acto Crescent Products Co., Inc., New York, N. Y., 1946. 25¢

Books for Veterans' Guidance. Notes on Significant and Authoritative Books About the Attitudes, Problems, and Opportunities of the Nation's Ex-Servicemen. Public Affairs Book Service, 2153 Florida Ave., Washington 8, D. C., 10¢.

Keep Your Lathe In Trim, Keep Your Lathe Clean, Oiling the Lathe, The Installation and Leveling of the Lathe, South Bend Precision Lathes, Catalog 25, and *Modern School Shops,* Third Edition. South Bend Lathe Works, South Bend, Ind., 1946. Free.

Housekeeping Hows and Whys as Applied to Floors, Furniture, and Woodwork. C. S. Johnson & Son, Inc., Racine, Wis., 1946. Free.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High School Credit and Diplomas Through Examinations and Out-of-School Experiences. Bulletin 1946, No. 7, U. S. Office of Education, Washington, D. C., 20¢.

If I Were 21. William S. Knudsen. Reprints from American Magazine, June, 1939, available from South Bend Lathe Works, South Bend, Ind. Free.

How to Grind Lathe Tool Cutter Bits, How to Cut Screw Threads in the Lathe. South Bend Lathe Works, South Bend, Inc., 1946. 10¢ each.

How to Run a Lathe, Volume 1. Forty-third Edition. South Bend Lathe Works, South Bend, Ind. 25¢.

The South Bend Machine Shop Course for Apprentice Training, Book No. 39B. South Bend Lathe Works, South Bend, Ind. 50¢.

Teaching Aids. Technical Press Service, Westinghouse Electric Corp., Pittsburgh, Pa., 1946. Free.

March Against Cancer. Indiana Cancer Society, Inc., and Department of Public Instruction, Indianapolis, Ind., 1946. 25¢ outside Indiana.

Conservation of Water. Indiana Department of Conservation, Department of Forestry and Conservation, Purdue University, and Indiana State Department of Public Instruction, Indianapolis, Ind. 25¢ outside Indiana.

B-K Bacteria Control for Dairy Equipment, B-K Sanitation. Pennsylvania Salt Manufacturing Co., Philadelphia, Pa., 1946. Free.

Publicity for Vocational Agriculture in Tennessee, Methods Publication No. 2. Department of Agricultural Education, University of Tennessee in cooperation with the State Board for Vocational Education.

Establishing and Operating a Small Woodworking Shop. Field Office of the Department of Commerce, or Superintendent of Documents, Washington, D. C., 15¢.

Household Employment, a Digest of Current Information. U. S. Department of Labor, Women's Bureau, Washington, D. C.

Did You Ever See a Dream Growing? Spotlight on Gary. National Urban League, 1133 Broadway, New York 10, N. Y.

Establishing and Operating a Restaurant. Field Offices of Department of Commerce, or Superintendent of Documents, Washington 25, D. C., 45¢.

Establishing and Operating a Gift and Art Shop. Field Offices of the Department of Commerce or Superintendent of Documents, Washington, D. C., 15¢.

Establishing and Operating a Jewelry Store. Field Offices of the Department of Commerce or Superintendent of Documents, Washington, D. C., 15¢.

Aviation Education Material. Massachusetts Aviation Education Committee. Copies may be secured by writing to A. Russell Mack, supervisor of Secondary Education, 200 Newbury St., Boston, Mass.

Washington

(Continued from page 27)

agriculture is a predominant industry, thereby providing centralized housing and facilities for State, Federal, and local offices engaged in administration of agricultural and related programs concerned with the welfare of the farm population. To *Agriculture.*

S. 81. To assist states in improving and maintaining free public education by providing funds for supplementing teachers salaries. To *Labor and Public Welfare.*

S. 140. To create executive department to be known as Department of Health, Education, and Security; read twice. To *Expenditures in Executive Departments.*

S. 170. To authorize appropriation to increase rate of salary payments to teachers in public elementary and secondary schools. To *Labor and Public Welfare.*

S. 199. To authorize appropriation of funds to assist states in more nearly equalizing educational effort among and within the states by assistance to nonpublic tax exempt schools of secondary grade or less for nec sary transportation of pupils, school health examinations and services, and purchase of non-religious instructional supplies and equipment including books. To *Labor and Public Welfare.*

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With the Associations

● Massachusetts Vocational Association will hold its state convention in New Bedford, May 10. The Southeastern Chapter of the MVA will be host. Sarah Murray is general convention chairman; Anthony Rose is president of Southeastern Chapter.

● Michigan Vocational Association will hold a state meeting either the second week of May or first week in June. A. Archie Nevins, Kalamazoo Public Schools, is president and Glen Rice, Western Michigan College of Education, secretary-treasurer.

● New officers of the South Dakota Vocational Association are E. E. Schmierer, Mitchell, president; Irene Otterby, Vermillion, vice president; S. M. Polich, Gettysburg, secretary; H. E. Urton, Pierre, treasurer.

● Industrial Education Section meeting of the Texas State Teachers Association, was held in Houston November 29, 1946. W. E. Lowry, executive director of the Texas State Board for Vocational Education, Victor Randel, head of the Industrial Arts Department of Sam Houston State Teachers College, and C. C. Davis, Industrial Education Department of North Texas State College, were speakers. A "Texas Vocational Association Group Insurance Program" was presented. Chris H. Groneman, president of TVA, presided.

The following day the Annual Texas Vocational Association Breakfast was held. A panel of prominent legislators from Houston area discussed legislation pertaining to vocational education.

● The Nebraska Vocational Agriculture Association's planning committee is working on revision and reprinting of the curriculum; a state FFA camp; evaluation of visual aids equipment including films; publicity; market days at Omaha; summer school courses; equipment and facilities for teacher training; subject matter and helps; and state plans for the future. Projects which the NVAA has sponsored include the Nebraska Project Record Book, The Nebraska Project Manual, and A Curriculum in Vocational Agriculture for Nebraska High Schools. Lewis Klein, Seward, is president.

● Allen Lee, president of the Oregon Vocational Association last year, is president of the Oregon Agricultural Teachers Association this year.

● Several associations held meetings and elected officers preceding or during the AVA convention in St. Louis.

Robert Cammack, state director of vocational education for Alabama, was elected president of the National Association of State Directors of Vocational Education.

The National Association of Industrial Teacher Trainers elected E. L. Williams, Texas A & M College, president; vice presidents are Clyde Bowman, Stout Institute; Merritt W. Haynes, teacher trainer in industrial education, Georgia; and Melvin Barlow, University of California. Trustees are G. Harold Silvius, Wayne University, Detroit; Eugene D. Fink, New York State Education Department; and Charles Crompton, University of Kentucky.

National Association of State Supervisors of Home Economics elected Bertha Kohlhagen, state supervisor of home economics education for Oregon as president; Edna Kraft, state supervisor of home economics education, Iowa, vice president; and Boletha Frojen, state supervisor of home economics education, Florida, secretary-treasurer.

The National Council of Local Administrators of Vocational Education and Practical Arts reelected all officers. Earl L. Bedell, Detroit, Michigan, is president; Frank Huffaker, Chattanooga, Tennessee, secretary.

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—12" floor type tilting arbor saw has a cast steel base. No die castings. Rips to the center of 52" panel and has a 4" depth of cut.

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and Warren K. Begeman, St. Louis, Missouri, treasurer. Vice presidents are Jesse F. Rees, Harrisburg, Pa., and Clara H. Krauter, Essex County, New Jersey.

State Supervisors of Trade and Industrial Education elected Warren A. Seeley, state supervisor of trade and industrial education, Tennessee, president; E. M. Claude, state supervisor for Illinois, vice president; and Robert M. Reese, state supervisor, Ohio, secretary-treasurer.

• The Hawaii Vocational Association is making a drive for membership. Every member of the vocational division of the schools in the Islands is being urged to join, by M. M. Beers, the Insular Director of Vocational Education. This year the Hawaiian Association is again publishing its newsletter, the *Observer*. The last page of Volume 2, Number 2 contained three application blanks and each member is being asked to sign up three additional members this year.

• The annual meeting of the Ohio Industrial Arts Association will be held April 4-5 in Columbus. John A. Whitesel is president and R. O. Knight secretary of the Association.

• Louisiana Vocational Association met at Shreveport, La., Nov. 26, and elected M. C. Garr, Baton Rouge, president; O. J. Wenzel, Houma, vice president; and Jack L. Harper, Ruston, secretary-treasurer. Mr. Garr is professor of agricultural education at Louisiana State University.

CONVENTION CALENDAR

Alabama Vocational Association, March 27-28.

Illinois Vocational Association, April 10, 11, 12; Hotel Pere Marquette, Peoria, Ill.

Indiana Industrial Education Association, April 17, 18, 19; Turkey Run State Park.

Massachusetts Vocational Association, May 10, New Bedford.

Michigan Industrial Education Society, April 10, 11, 12; Cass Technical High School, Detroit.

New Jersey Vocational Association, March 20, 21, 22; Beckley-Carteret Hotel, Asbury Park.

New York Vocational and Practical Arts Association, April 7, 8, 9, 10; Pennsylvania Hotel, New York City.

Pennsylvania Vocational Association, June 20, 21; Eagles Mere.

Ohio Industrial Arts Association, April 4, 5; Columbus.

Tennessee Vocational Association, April 3 or 4.

Texas Vocational Association, April 3, 4, 5; Hotel Texas, Fort Worth.

Wisconsin Vocational & Adult Education Association, May 1, 2, 3; Hotel Schroder, Milwaukee.

Associations Day

(Continued from page 19)

are arranged further promoting acquaintanceship and understanding.

The Chico Vocational Associations Day is the first in the state to follow this pattern and work for complete representation and participation of vocational groups and administrators. Plans were initiated following the May meeting of the California Vocational Associations Advisory Committee. The committee organizations started functioning, and teachers throughout the area in the different vocational departments cooperated generously in furnishing the exhibits and demonstrations, with additional units provided by students of the college departments.

Leaders were prepared for their special assignments, and on the morning of the program they were first given a brief summary of the entire plan, followed by a quick trip around the exhibits for final orientation.

A questionnaire distributed at the conclusion of the program showed overwhelming approval of the project and valuable suggestions to guide the planning of the next Vocational Associations Day.

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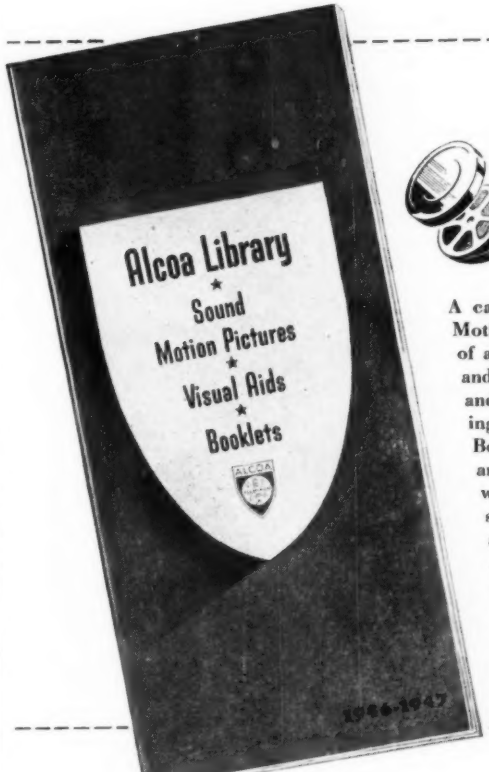

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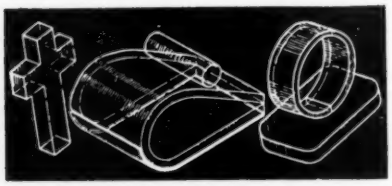

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The new Carmen-Bronson PLASTICS HANDBOOK describes in detail the professional techniques of fabricating Plexiglas, Lucite, Bakelite, Polystyrene, Lignolite and other plastics. It discusses business opportunities in the plastics field; and gives working plans for many simple and advanced construction projects.

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The Carmen-Bronson CATALOG gives you complete prices and data on all the materials you need for classroom use. Plexiglas, Lucite, Bakelite, Lumarith, Lignolite, Tenite, Polystyrene, etc., in sheets, rods, tubes and special forms —crystal-clear and in many rich, glowing colors. Also lists numerous cements, dyes, compounds, accessories, supplies and semi-fabricated kits. Extra low prices—plus large discounts for quantity purchases!

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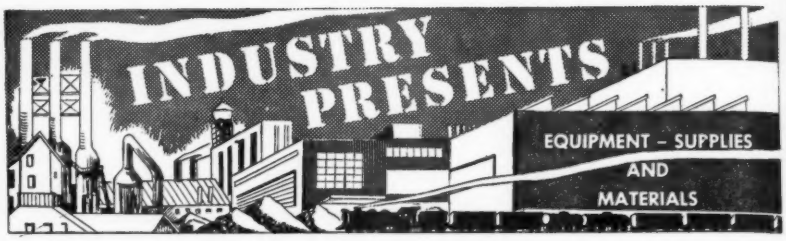


Duro Metal Products Co. offers a compact low-priced workshop powered by an interchangeable high speed electric power unit. A single heavy-duty electric power unit is locked in place to operate five other power tools, making possible scores of operations such as buffing, grinding, turning, drilling, shaping, routing, in wood, plastics, and light metal. 1

Lincoln Electric Co. announces the new "Fleet-Arc" welder, equipped with the "Arc Booster," which surpasses the conventional AC welders in ease of welding, depth of penetration, range of output, economy of operation, safety, dependability, and service life. The Arc Booster augments the current the instant the arc is struck and the arc is started automatically the moment the electrode touches the work. 2

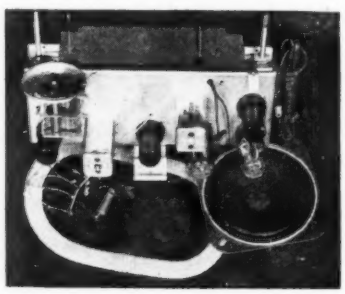
Ergolyte Manufacturing Co., announces a dual purpose welding kit, the Ergolyte Junior, to meet the demand for a low-priced welder that operates on 110 volt circuit. It has a capacity of 80 amps and is capable of a great many light welding, soldering, and brazing jobs. 3

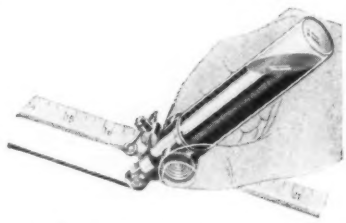
Radiant Manufacturing Corp. has a hanging screen for showings in auditoriums. It is available in eight sizes, from 6′ x 8′ to 12′ x 12′. It also may be used with a tripod, has ingenious hanger brackets, heavy-duty spring roller, dustproof metal housing, reinforced metal caps, lustrous duo-color combination, balanced pull cord. 4

Ohmite Manufacturing Co. has produced a pocket-size Ohm's Calculator incorporating a number of new features. With one setting of the slide it gives the answer to any Ohm's Law problem, reading directly into ohms, volts, amperes, and watts. It will also solve parallel resistance and series capacitance problems. 5

Precision Apparatus Co., Inc., announces their 954-P Electronamic Tube Battery and Set Tester. The unit is a portable combination mutual conductance type vacuum tube tester, radio battery tester and 37-range super-sensitive A.C.-D.C. Multi-Range Set Tester, with ranges to 6,000 Volts A.C. and D.C. at 20,000 ohms per volt D.C. 6

General Electric Company's Electronics Department, Specialty Division, has made available radio receiver construction kits for radio education appliances in schools and colleges. Designed to illustrate all principles involved in modern radio receiver construction, the new kits are similar to the type used extensively in the radio and electronic training courses conducted during the war by the Army and Navy. The kits include all parts necessary to build a complete 5-tube superheterodyne receiver, a punched chassis, tubes, loop antenna, 5-inch loudspeaker, and specially written instructions and diagrams. 7



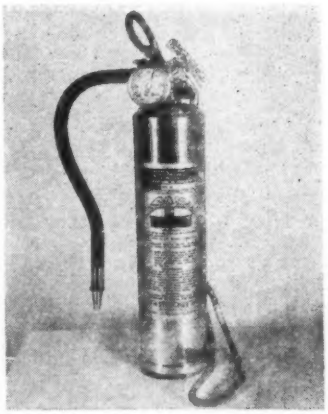


Wendell Mfg. Co. is the designer of a new model painters' stripping tool, furnished with 1/16″ wheel-tips for the original price. Tools with wheel-tips in sizes 1/16″, 1/32″, 3/64″, 5/64″, 3/32″, 1/8″ are available also. The tubular glass paint fountain is only slightly larger than the barrel on

Additional information about products mentioned in "Industry Presents" columns may be obtained by using the coupon on page 39, where please circle the number that corresponds to the one at the end of announcement in these columns.

most fountain pens and the entire unit is not cumbersome. Different fountains can be kept on hand for each color, which can be capped and set aside without emptying. The patented wheel-tip assembly is smaller, more compact, designed to handle an even flow of paint without leakage or flooding. **8**

Union STOP FIRE Corp., manufactures a stored-pressure hand extinguisher, as easy to use as a garden hose. Underwriters - approved, the tank is out of the way, suspended by a shoulder sling, leaving both hands free to aim the extinguisher and direct the aim at the fire. Carbon dioxide is combined with carbon tetrachloride to produce a chemical of extraordinary effectiveness in putting out the fire. It is shot as a fine spray from the STOP-FIRE. **9**



Recipe Card Products, Inc., has produced a cook book in card file form, which includes 300 recipes on 100 cards. Cards are 3" x 5", with the subject in the center guide and the box can be hung in the kitchen if desirable. Recipes include many simple tricks and are given by steps. **10**

Optrom Inc., manufacturers of audio visual education equipment, has issued a catalog of its new products. **11**

The Daven Co. has developed a new Tone Compensating Attenuator. The unit is essentially a ladder network designed so that the frequency characteristics follow the hearing response curves of the human ear. Bass frequencies have a smaller loss than the middle or upper registers without rendering a false or pumped response. By proper external connection to lugs on the terminal board it is possible to obtain six different Attenuation vs. Frequency curves with the LAC-720, varying from the human ear type of response to a flat frequency type. **12**

Lyon Metal Products, Inc., has a line of filing cabinets that unites a number of popular and original features. They are available in 11 models, with or without general locks, in suspension and non-suspension types. In the legal size, two, three, and four-drawer files 17½" wide are available. In the non-suspension type, two and four-drawer files in both letter and legal size are available. Among desirable features are rounded corners on drawers. **13**

BLOCK, GAVEL of Historic Wood

TRADITIONALLY, a gavel and block are presented to each incoming president of the National Association of State Directors of Vocational Education by the outgoing president, at the annual meeting of the association held at the time of the AVA convention.

The gavel and block presented to Robert Cammack, state director of vocational education for Alabama, by John J. Seidel, state director for Maryland, at the St. Louis AVA convention on December 3, 1946, had more than usual historic significance. It was made from wood taken from the building which educational historians claim to be the first vocational school established and built in America.

Mr. Seidel quoted from records of the church in making the presentation.

"During Colonial days, and during the period of 1740-50, a Rev. Thomas Beacon, Episcopal Rector of the White Marsh parish church on the eastern shore of the Colony of Maryland, just adjacent to the eastern shore of the Chesapeake Bay, interested distinguished citizens of that period in subscribing sufficient funds to purchase and erect what was later to be known as A Work School for Youth.

"The original church records, kept by church authorities, have been read and statements of a report in 1753 (almost 200 years ago) from Rev. Bacon to the Bishop of England showed that he was authorized by members of the vestry to purchase 20 acres of ground and plan the erection of a building thereon for the specific purpose of educating young men in the community in the 'Arts and Crafts of Mechanical Pursuits' and 'The Scientific Production of Agriculture Products.' In the original church records the objectives of the school are listed. Among the most interesting is the following statement:

" 'Each subscriber is authorized to appoint one pupil in the appropriate type of work education in the school. Non-subscribers to the original school fund would have the privilege of sending one indentured youth to the school for whom they must pay tuition but to these indentured students would be taught the fear of God free of charge.'

"The building is still standing on the original site, located about seven miles from the small town of Oxford, on the Chesapeake Bay, at one time the Port of Entry for Maryland. The bricks of the building were made in England. It is well known that the sailing vessels of that period carried tobacco from the Colonies to England and returned with bricks as ballast. Many of the colonial buildings of the Middle Atlantic States were built of bricks brought over during that period.

"During the past month the wood used in making this gavel and block set was taken from the original building, erected in 1754-1755, as rough hewn members of the roof. It consists of white oak, of which the gavel is made, and red cedar, of which the box and block are made."

Students of the Thomas A. Edison Vocational School in Baltimore participated in making the gavel and block set, under supervision of their instructors.

Products and Services Guide

Detailed facts about many new teaching aids and school supplies announced by advertisers may be obtained by encircling the numbers opposite materials described in this index and using coupon below. Requests will receive prompt attention.

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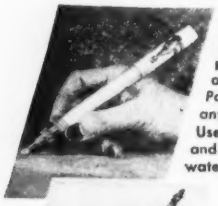

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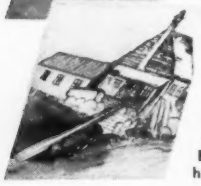

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Who's Who

Hugh L. Oakley, former director of industrial arts and vocational education in Lexington, Ky., is head of the new department of industrial education at Murray State Teachers College, Murray, Ky.

Dwight C. Baird has accepted a position as director of placement, University of Denver. He was formerly state supervisor of occupational information and guidance for Colorado.

John Hughes has resigned as state supervisor of occupational information and guidance for Maine to become guidance consultant with the California Test Bureau.

Lelia Massey has been appointed head of the home economics department of Ohio Wesleyan University. Miss Massey has been executive secretary of the American Home Economics Association, with headquarters in Washington, D. C., the past two and one-half years.

Mrs. Caroline W. Edwards has retired as director of homemaking and cafeteria service, department of public instruction, Hawaii. Mrs. Edwards taught household arts in New York City before she went to Hawaii in 1922, as a member of the central grammar school staff. The following year she was transferred to the Territorial Normal and Training School and in 1925 was appointed director of home economics and cafeteria service. During her 21 years with the program it has become nationally known, and during the war she made the public schools emergency feeding centers. Mrs. Edwards retired because of ill health.

Mrs. Frances Field Wynn was appointed as Mrs. Edwards' successor. Mrs. Wynn joined the home economics staff in 1935 and was Mrs. Edwards' assistant.

Oren E. Long, superintendent of the department of public instruction of Hawaii, has been presented a military citation by **Lt. Gen. Robert C. Richardson, Jr.,** commanding army forces in the Mid-Pacific, for the work of the Hawaiian schools during the war. The original citation is to hang in the board room of the Insular department and copies will be hung in every school on the Island.

Marine Captain George P. Wolf, Jr., a former student of printing at Wahpeton High School, North Dakota, received recognition in the magazine *Liberty* for his work as head of police forces in Yokosuka, Japanese city of 232,000.

Roy Karnes is now assistant professor of industrial education at the University of Missouri. Formerly with North Texas State Teachers College, he served as assistant director of the instructor-training department of the Armored School, Fort Knox, Ky., during the war.

W. C. Bicknell, formerly director of mechanical arts for veterans at the University of Missouri, is now professor and chairman of the department of industrial education, Southern Illinois Normal University, Carbondale.

John L. Feirer has been appointed assistant director of vocational education in charge of industrial arts, at Western Michigan College of Education in Kalamazoo.

Paul Komatz has been appointed director of industrial arts at Parsons, Kan.

L. B. Perry has retired after half a century in education. He began his career in Indiana and upon retirement was an industrial arts teacher in the Rochester, Indiana, schools.

W. Carl Wilson, senior rehabilitation counselor in the Raleigh district office of the division of vocational rehabilitation, has been made head of the department of research and statistics in the North Carolina state office.

Harold B. Taylor has succeeded Harry F. Ainsworth as state supervisor of vocational agriculture in Indiana. He had been associate state supervisor since last September.

Carols A. Rodriguez, former local director of the Guayama Vocational School, Puerto Rico, has been appointed local director of the Dr. J. Gomez Brioso Vocational School in Santurce, P. R. He fills the vacancy caused by the retirement of Julian Armstrong.

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P. S. Waldeck

Philip S. Waldeck has been appointed first state supervisor of industrial arts for Ohio. He served in the Navy as a Lieut. Commander, for three years as aviation engineering officer of a combat aircraft service unit. He also assisted in development of a curriculum for aviation machinists' mates and ordnance men at the Naval Air Technical Training Command at Memphis, Tenn., in the early months of the war. Before that time he was instructor of general metals in the Columbus Public Schools. He has served as chairman of state and sectional industrial arts associations and for several years was a member of the State Committee on Industrial Arts.

William L. Nicholas, formerly Nebraska state supervisor of occupational information and guidance, has accepted the presidency of State Teachers College, Peru, Nebraska.

Recent additions to the industrial arts staff of State Teachers College, Indiana, Pa., are **Glendon O. Arvin, Harry Barrick,** and **Harold Snidow.**

Mrs. Ruth D. Sulenta, formerly associate professor of home economics, University of Hawaii, has resigned. **Dr. Virginia Phillips,** formerly of Utah State Agricultural College, has joined the staff of the University of Hawaii as resident teacher trainer.

May DuBois, formerly associate professor of home economics education, is taking her sabbatical leave from Oregon State College to study at Ohio State University.

Commery Coleman, formerly supervising teacher at Philomath High School, is supervisor of student teachers at Oregon State College.

Dr. Florence E. Blazier has returned from her sabbatical leave to resume her responsibilities as head of home economics education at Oregon State College.

Marion Hess, formerly supervising teacher at Albany High School, is now assistant state supervisor of home economics education with the State Office in Salem, Oregon.

Arthur A. Elder, director of the Workers' Education Service at the University of Michigan, has been appointed director of the Labor Department's Labor Education Service.

George W. Kadel, formerly instructor in commercial art at Norman Crozier Technical High School, Dallas, Texas, is now director of design for the Canadian National Exhibition. He is located at the Royal York Hotel in Toronto.

Fred W. Erhard, assistant director of Apprentice-Training Service, U. S. Department of Labor, has been awarded the Legion of Merit Citation, for "exceptional meritorious service from September, 1944 to April, 1946, as Chief, Civilian Technical Training, and Chief, Civilian Training Branch, Office Chief of Ordnance."

Carmelina Capo, resident teacher trainer in home economics at the University of Puerto Rico, who spent last year studying at Cornell University, has returned to the Island as assistant supervisor of home economics education.

In Tribute

James Harrigan, former principal of the McKee Vocational High School at St. George, Staten Island, died at Fort Lauderdale, Florida, in December. Mr. Harrigan had taught in the schools of Brooklyn and Staten Island for 40 years. He began his vocational work in 1920 when he was asked to open a continuation school and was given three rooms in a Port Richmond school for the purpose. With borrowed equipment he launched the program. When the McKee Vocational High School was decided upon, he was authorized to select the site and was appointed first principal. He retired in 1942.

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Research Bulletin No. 1 — Occupational Adjustments of Vocational School Graduates. 1940. Pp. 132. Price 10 cents each; 10 or more, 5 cents each.

SURVEY FORMS for use in making local or area studies of graduates and former students of industrial, home economics, or agricultural education schools or departments; useful to occupational guidance, training, and placement programs. 1940. Pp. 4 ea. Prices: 10 copies, 15 cents; 100 copies, $1.05; 1,000 copies, $8.25.

Research Bulletin No. 2—A Study of Industrial Teacher Education at the Graduate Level. 1941. Pp. 42. Price, 10 cents each; 10 or more, 5 cents each.

An Enlarged Program of Vocational Education With Special Reference to Larger Administrative Units. 1943. Pp. 52. Price, 40 cents each; 10 or more, 35 cents each.

Improving Instruction in Industrial Arts. 1946. Price, 25 cents each; 10 or more, 20 cents each.

State Supervision of Industrial Arts Education. 1946. Free.

America's Vocational Schools. 1945. Pp. 56. Prices: single copies, 20 cents each; 100 or more, 15 cents per copy; 1,000 or more, 13 cents per copy.

The Carry-Over Into Homes of the Teaching of Family Living to In-School and Out-of-School Youth. 1943. Pp. 17. Prices: 1 to 9 copies, 20 cents each; 10 to 99 copies, 15 cents each; 100 or more copies, 9 cents each.

Evaluative Criteria for Vocational Education in Agriculture. 1942. (Revised). Pp. 75. Prices: 20 cents each; 10 or more copies, 15 cents each.

Manual of Directions for Use with "Evaluative Criteria for Vocational Education in Agriculture, 1942 Revision." 1943. Pp. 15. Prices: 1 to 9 copies, 10 cents each; 10 to 99 copies, 9 cents each; 100 or more copies, 8 cents each.

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WHAT DO YOU THINK?

UNLESS principals and superintendents in charge of our junior and senior high schools believe that occupational information and vocational guidance are important to young people, they will not get any worthy of the name—except in rare instances.

Occupational information, to be useful, must be factual and up to date. It must be concerned with labor statistics, needs of the labor market, occupational hazards and diseases, physical demands, starting wages, and other such down-to-earth data. It cannot be a glamorized press-agent account of some industry, nor desultory reading suggested by a well-wishing teacher who knows something should be done but hasn't the background nor the time to make a sound contribution.

Educators have been doing a great deal of talking and writing about occupational information and guidance for years; leaders have pointed out the importance of providing all youth, as they go through the public schools, with occupational information. In some schools there are concentrated dozes of it given during a period of a few weeks or even extending to one semester; in others it is a unit in some other subject course and extends over one or more semesters.

THE need for imparting the kind of information young people need concerning the various occupations and jobs in the fields of agriculture, industry, business, government, the professions, and homemaking, is increasingly important. With the advent of the George Barden Act, more Federal funds are available than ever before for developing a sound program of vocational guidance. It is incumbent upon educational administrators to look closely at their total curriculum and at the guidance problem, and determine how occupational information and vocational guidance may be given to youth so that it will not be vague, disorganized, and perhaps misleading; to work with their state guidance officials and take advantage of all services offered.

No matter when a student drops out of school he should have some information about the employment possibilities of his community. He should know something about the jobs and occupations in a business and industry and be able realistically to match his aptitudes, characteristics, interests, physical and mental qualifications, against entrance requirements and the possibility of continuing in an occupation as a step toward a career. He should know the procedures common to all industries for getting a job, and the characteristics essential to advancement and success in any organization.

The difficulty involved in adding courses to an already crowded curriculum is well known; also, the traditional method of adding subjects as electives is not the best way to meet the situation.

IT IS important that thought be given to the organization of a guidance program which will not interfere with the core curriculum, but which will consider the students' needs and adequately provide for them. This means a sound plan, worked out by the administration, and thoroughly explained to the entire faculty (including librarians) before it is launched and student participation invited. The same plan may not work in all schools. Each administrative head must work out his school's program on the basis of his own situation. He may find that certain subject courses (as social studies or civics) can best be made responsible for including units for the study of occupations, supplemented with occupational studies in the other subject courses. It may be possible to organize one foundation course which will be a required subject in an early year, with subsequent unit courses built upon and advancing from this basic course. Whatever plan is best for the school system, it must be a consistent, long-time plan. Each subject teacher must know where his specialty fits into the business and occupational world. He should make that information part of his subject teaching. All teachers should know how to present occupational information in accordance with the school plan, and should point out the value of their subject, in every conveivable line of work, day after day. They should be obliged to find out (if they do not already know) the jobs and occupations which require a knowledge of their subject field.

OCCUPATIONS in which a student seems interested could be studied in greater detail in the basic or unit courses, and variations in occupations common to several industries, would be revealed. Counselors, also, would have a broader and more thorough base upon which to work when counseling students. Youth would be able to select more wisely their high school courses, and those who continue in school would have an opportunity to know more about institutions for preparatory occupational training on college or below college level.

Such a plan for occupational information should start with the 7th grade and carry through the 12th. In this way each student would come into contact (vicariously, at least) with the maximum number of occupations during his school life, and be better prepared than ever before for his place in the world of work.

All schools should have such a program, since all send youth into occupational training courses either in their own system or in some other training institution, if not directly into occupational life.

What do you think?

George H. Fern

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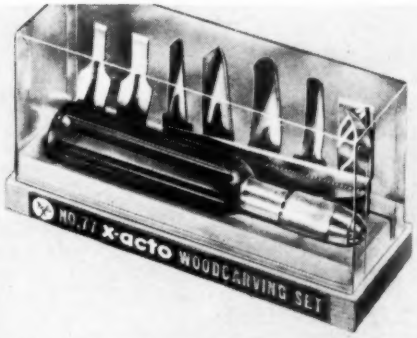

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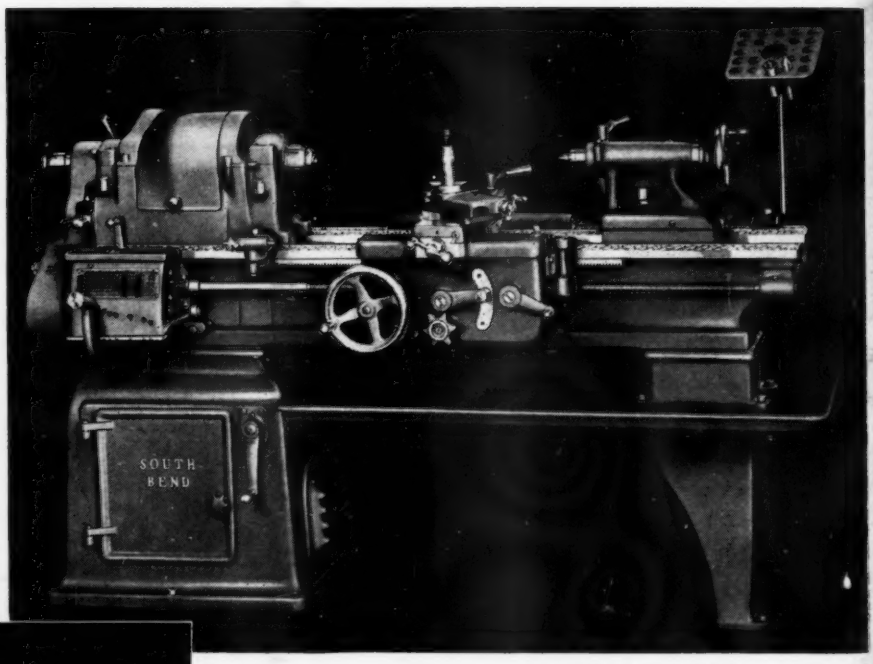

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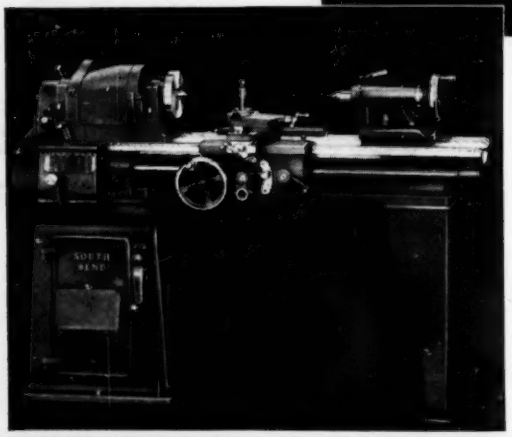

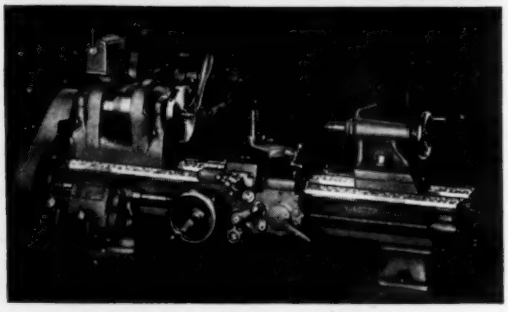

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